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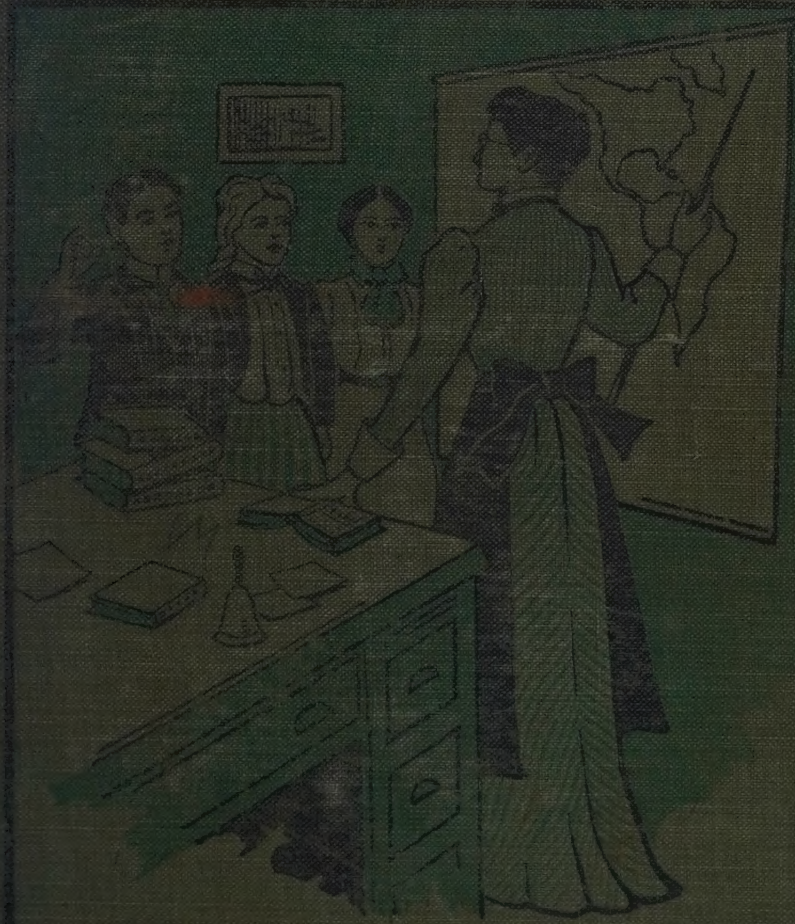

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BY

ASA H. CRAIG

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QUESTIONS AND ANSWERS

ON

UNITED STATES HISTORY.

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1. *What is History?*

A recital of what has happened respecting nations and countries.

2. *What are the generally accepted divisions of history?*

Ancient and Modern, with subdivisions of Sacred and Profane.

3. *What is* (a) *Ancient history?* (b) *Modern?* (c) *Sacred?* (d) *Profane?*

An account of events (*a*) from the creation of the world to the birth of Christ; (*b*) from the birth of Christ to the present time; (*c*) the contents of the Holy Scriptures; (*d*) any history not regarded as inspired.

4. *What are the great events of ancient history?*

The rise and fall of the four great empires: Assyria, Persia, Greece and Rome.

5. *For what is modern history distinguished?*

Great inventions and discoveries, the advancement of the arts of peace, the improvement of civil government, and the spread of civilization to all parts of the earth.

6. *How was America first settled?*

It is still a matter of conjecture; but probably the first

visitors from the Old World came from Asia by way of Bering Strait, or on Pacific coasting vessels driven by storms across the ocean and shipwrecked on the shores of our continent.

7. *What proofs show that America was inhabited by a race of men previous to the Indians?*

In Mexico, Central America and South America there are remains of temples, bridges, aqueducts and of ancient cities, indicative of a high state of civilization, the Indians having no traditions of their origin. Thousands of curiously constructed earth mounds, which are scattered through the Mississippi River Valley, from the Gulf of Mexico to the Great Lakes, bear evidence that a different race from the Indians inhabited this continent before them.

8. *Were these earlier inhabitants all of one race?*

The relics found in the mounds indicate that their builders were not of the same order of civilization as is represented in the Mexican and Peruvian ruins.

9. *Why should we suppose that the Indians were a distinct race of men from those of this prehistoric time?*

The natural instincts of the Indians are opposed to improvement in the arts and sciences. For the three hundred years that their habits have been studied, they have always gloried in war and the chase, living where fish and game abound, and content with rude dwellings instead of producing any permanent or high-class architecture. The mound relics, also, are of types which have not survived, but which would have done so if they had entered into the lives of so conservative a race as the Indians.

10. *What records show that America was discovered previous to its discovery by Columbus?*

The historical records of Iceland assert that America was discovered by the Northmen in 1002.

11. *Who were the Northmen?*

The inhabitants of Norway and Sweden were so called.

12. *What lands did they discover and what evidences exist of their explorations? Were their discoveries of any benefit?*

Their records, or traditions, describe the entire Atlantic coast; and the old tower at Newport, R.I., the inscriptions on the rocks at Dighton, Mass., and minor other relics are evidences of their claims. But no benefits arose from their discoveries, as the voyages were discontinued and the new country apparently forgotten.

13. *Into how many chief epochs can the history of the United States be divided?*

Six: First, from the discovery of the continent to the first settlement; second, from the first settlement to the outbreak of the Revolutionary war; third, from the beginning of this war to the adoption of the Constitution; fourth, from the adoption of the Constitution to the commencement of the civil war; fifth, from this to the surrender of Lee's army; and sixth, from the close of the civil war to the present day.

14. *What idea led to the discovery of America by Columbus? What results were sought?*

That the earth was a sphere, and upon this belief Columbus attempted to find a westward route to India.

15. *What land did Columbus first discover, and when?*

The island of Guanahani or San Salvador, on Friday, October 12, 1492. This is a much disputed point, however.

16. *Give some account of Columbus's trials and his final success?*

Columbus, being too poor to fit out an expedition, applied in vain to his own countrymen for aid, and then to the king of Portugal. He next turned to Spain, and in the meantime sent his brother to England, but his appeals

were laughed at, the very children mocking him as he passed in the streets. Eighteen years passed thus, seven of them in waiting for the answer of King Ferdinand of Spain. Saddened by his continued failures, he was leaving Spain, begging a little food at convent doors, and resolving to apply to the king of France. At a lonely mountain pass he was overtaken by a messenger from Queen Isabella, asking him to return. Urged by a desire to spread the Catholic faith throughout the world, and to see Spain the mistress of lands in Asia, the queen had changed her mind. To the objections of Ferdinand she answered: "I undertake the enterprise for my crown of Castile, and will pledge my jewels to raise the necessary funds."

17. *How many vessels composed his first fleet? When did they sail?*

Three: the Pinta, the Santa Maria and the Nina. They sailed from Palos, Spain, August 3, 1492.

18. (a) *Where and when did Columbus discover the mainland?* (b) *How many voyages did he make?*

(*a*) At the mouth of the Orinoco River, in 1498. (*b*) Four.

19. *Who discovered the mainland before Columbus? Where? When?*

John Cabot and his son Sebastian. The coast of Labrador. 1497.

20. *Why was the continent named America instead of Columbia?*

A German, who published a description of the New World, suggested that it should be called America in honor of Americus Vespucius, who made claims to the first discoveries.

21. *What reward did Columbus receive for his discoveries? Where was he buried?*

Others were jealous of his successes, and accused him of treason to the Spanish government. He was laden with

chains and brought home a prisoner, and died without reward, broken-hearted. He was buried at Valladolid, Spain, where his body remained until 1513; it was then transported to Seville; in 1536 it was removed to the city of San Domingo; in 1796 it found a resting-place in the cathedral at Havana, whence, however, it was in 1899 removed to Spain.

22. *What nations explored the country now known as the United States?*

The Spaniards, English, French and Dutch.

23. *Where did the Spaniards make their claims? The French? The English? The Dutch?*

The Spaniards in the West Indies and the southern part of the United States; the French in the northern part of the United States and in Canada, having explored the Great Lakes, the Mississippi River from the Falls of St. Anthony to the Gulf, the Illinois, Wisconsin, Wabash, Maumee, Fox, and many other rivers; the English on the Atlantic coast at various points, which they named Virginia; the Dutch in New York, which they called the New Netherlands.

24. *Name the most important Spanish discoverers and explorers.*

Columbus, Vespucci, De Leon, Balboa, Grijalvah, De Ayllon, De Narvaez, Magellan, De Soto and Melendez.

25. *What induced Ponce de Leon to come to the New World? Where were his discoveries?*

He was a Spanish soldier, who, being in disgrace, sought the glory of conquest to restore his tarnished reputation. He also went in search of a fountain, whose waters were supposed to restore youth to all who drank of them. He discovered Florida in 1512.

26. *What discovery was made by Vasco de Balboa?*

He crossed the isthmus of Panama, and from the summit of the Andes first saw the Pacific Ocean, September 26, 1513.

27. *What was the object of De Narvaez's explorations?*

Receiving a grant of Florida in 1528, he attempted its conquest with 300 men, allured by the prospect of gold. The exploration proved a failure. Many perished while wandering in the swamps. After arriving at the Gulf of Mexico, his men hurriedly constructed boats and put to sea; but were shipwrecked, and De Narvaez was lost. Six years afterward four survivors reached the Spanish settlements on the Pacific coast.

28. *What of Ferdinand de Soto and his explorations?*

De Soto was a Spanish nobleman, who invaded Florida in 1539, seeking gold. He discovered the Mississippi River in 1541, and was buried in its waters when he died the next year.

29. *When and by whom was the coast of Mexico discovered?*

By Grijalvah in 1518.

30. *Give an account of the expeditions of Pedro Melendez. Of De Ayllon. Of Magellan.*

Melendez was sent out by Philip II in 1565 to colonize Florida, but more particularly to destroy a colony of French Huguenots, who the year before had made a settlement near the mouth of the St. John's River. On being attacked the Huguenots put to sea in their vessels, but a furious storm destroyed their fleet, and they were washed ashore, where Melendez brutally butchered all who came near him. Only a few escaped.

In 1520 Vasquez de Ayllon, a wealthy Spaniard, undertook an expedition to America, and, landing on the present coast of South Carolina, decoyed a number of natives on board his fleet and sailed for home, intending to sell them in Europe as slaves; but three of his vessels were wrecked and most of the Indians were drowned. On reaching home he was honorably received by his government and sent on another kidnapping expedition, but it proved unsuccessful.

and he was financially ruined. This attempt to enslave the Indians caused them to lose all confidence in Spanish honor.

Magellan was the first European navigator to venture on the Pacific, and the first to sail round the world. This voyage took nearly three years, beginning in 1519. The Pacific was so named by Magellan on account of its peaceful appearance.

31. *When, where, and by whom was the first colony founded on the American continent?*

In 1510, at Darien, by the Spaniards.

32. *When, where, and by whom was the first permanent settlement made in the United States? The second?*

In 1565, at St. Augustine, by Melendez. The second also was founded by the Spaniards at Santa Fé in 1582.

33. *What parts of the New World were explored by the Spaniards?*

Central America, Mexico, Peru, Florida, the Mississippi Valley, New Mexico and the coast of California.

34. *Who first attempted to form English settlements in America?*

Sir Walter Raleigh and his half-brother, Sir Humphrey Gilbert. Their labors were unsuccessful, and the latter was drowned on the return voyage.

35. *When and where was the first permanent English settlement made in the United States?*

In 1607, at Jamestown, Virginia.

36. *Who sent out the settlers to Jamestown?*

The London Company, composed of noblemen, gentlemen, and merchants of London.

37. *What territory was granted to the London Company?*

All the country between the southern limit of Maryland and Cape Fear.

38. *How many charters had the London Company?*

Three. The first charter contained no suggestion of self-government. The people chose none of their officers; the king was to appoint two councils, one to reside in London and have control of all the colonies, and the other to reside in the colonies and have control of their local affairs. The second charter vested the authority in a governor instead of a local council; it gave the colonists no additional rights, nor were they consulted with regard to the change. The third charter gave to the stockholders the power to regulate the affairs of the company.

39. *Name the most important French discoverers. What sections did they explore?*

Verrazani and Cartier. Verrazani was sent out by the French king in 1524. He first touched the coast of North Carolina, and then sailed north to Newfoundland, having entered the harbors of New York and Newport. In 1534, James Cartier discovered and explored the Gulf and River of St. Lawrence.

40. *Who were the most important English discoverers and explorers?*

The Cabots, Sir Francis Drake, Sir Humphrey Gilbert, Sir Walter Raleigh and Bartholomew Gosnold.

41. *Of whom was the Plymouth Company composed? What territory was granted them?*

It was composed of persons from Plymouth, England. The grant was that tract of country lying between the forty-first and forty-fifth degrees of latitude, and was called North Virginia.

42. *Who were the first Spanish, French, English and Dutch discoverers?*

Columbus was the first discoverer under Spanish auspices, John Verrazani the first under French, John Cabot the first under English, and Hudson the first under Dutch.

43. *Where and when was the first permanent settlement made by the Dutch? By the French?*

By the Dutch at New York in 1613. By the French at Port Royal, N.S., in 1605.

44. *Where and when was the first white child of English parents born in America? What was her name?*

At the temporary settlement on Roanoke Island in 1587. Virginia Dare.

45. *What region of country was called Acadia?*

The tract lying between the present cities of Philadelphia and Montreal. The name has since been confined to New Brunswick, Nova Scotia and the adjacent islands.

46. *What can be said of Sir Francis Drake?*

He was an English sea captain, who explored the coast of California and Oregon in 1579, and returned home by the way of the Cape of Good Hope, having made the second circumnavigation of the world.

47. *Why did Raleigh name the lands he explored Virginia?*

In honor of Elizabeth, who was called the Virgin Queen.

48. *Who was Champlain?*

The pioneer who in 1609 discovered Lakes Champlain and Huron. He afterward led a party of Canadian Indians against the Iroquois, in northern New York, being the first white man to enter that region.

49. *Who were the Jesuit missionaries?*

French priests, who sought to convert the Indians to the Roman Catholic faith. They were the explorers of the Mississippi Valley. In 1668 they founded the mission of St. Mary, the oldest European settlement in Michigan.

50. *Who were the first partial explorers of the Mississippi and its branches?*

Joliet and Marquette.

51. *Who were La Salle and Father Hennepin?*

Jesuit missionaries, and early explorers of the northern lakes and rivers.

52. *Who discovered the Hudson River?*

Henry Hudson, an Englishman in the service of the Dutch government, in 1609. He sailed up the river to where the city of Hudson now stands.

53. *What was the object of Hudson's explorations?*

To find a northern passage to the East Indies.

54. *What is said of the fate of Hudson?*

In 1610, after discovering the strait and bay which bear his name, he was placed in an open boat with six sailors by some malcontent companions and abandoned.

55. *Who claimed the New Netherlands?*

The English and the Dutch.

56. *On what grounds did they base their respective claims?*

The English upon the discoveries of the Cabots, and the Dutch upon the explorations of Hudson.

57. *How was the dispute settled?*

By force of arms; the English maintained possession.

58. *At the close of the sixteenth century, where were the only permanent settlements?*

At St. Augustine and Santa Fé.

59. *Name five of the first permanent settlements in the New World, at the beginning of the seventeenth century.*

Port Royal, N.S., in 1605, by the French; Jamestown, in 1607, by the English; Quebec, in 1608, by the French; New York, in 1613, by the Dutch; and Plymouth, in 1620, by the English Pilgrims.

60. *Who were the Pilgrims?*

They were dissenters from the Church of England, who,

in order to worship in accordance with their conscience, first sought refuge in Holland; but, believing in the future prosperity of the New World, they decided to face all hardships and found a colony there. They landed at Plymouth, December 21, 1620. This was the first settlement founded in Massachusetts.

61. *How many came on the first voyage?*

One hundred and two. They came in a vessel called the Mayflower.

62. *Who was their first governor?*

John Carver.

63. *Was the colony prosperous?*

Nearly half its members died during the first four months, and all would have perished but for the aid of fishermen off the coast. Their sufferings continued four years, after which they prospered.

64. *Who was Roger Williams?*

A Puritan of the Massachusetts Bay colony, who was banished thence for his unpopular religious opinions. He afterward founded the first settlement in Rhode Island. This was in 1636.

65. *How did the Puritans treat the Quakers?*

They banished the Quakers from Massachusetts, imprisoned many, and put four to death.

66. *Who was Mrs. Anne Hutchinson?*

A woman who, during the year in which Roger Williams was banished, declared that she had special revelations from God, and with great fluency of speech expounded them to crowded congregations of women, causing much disturbance among the clergy and people of Boston. She was finally banished.

67. *What were the United Colonies of New England?*

The colonies collectively of Massachusetts Bay, Ply-

mouth, New Haven and Connecticut which in 1643 were united under one government.

68. *What was the object of this league?*

To protect its members against the Indians and the encroachments of the French and Dutch.

69. *Why was Providence, Rhode Island, so named?*

Because Roger Williams, having just escaped from the Puritans, was grateful for the tract (now Rhode Island) given to him by Canonicus, the Narragansett Indian chief, and compared it to a "gift of Providence."

70. *When and by what nation was negro slavery introduced into the United States?*

In 1619, by the Dutch.

71. *Who was Captain John Smith?*

One of the founders of Jamestown, who, as governor, conducted the affairs of the colony with great energy and success.

72. *Who were Pocahontas and Powhatan?*

Pocahontas was the daughter of the Indian chief, Powhatan. She saved the life of Capt. John Smith, who had been sentenced to death by her father.

73. *What became of Pocahontas?*

She married, in 1613, a young English planter, John Rolfe. Three years later when visiting London she was taken sick and died, leaving an infant son, whose descendants include some of the leading families of Virginia.

74. *When did the first English women come to America?*

In 1608, to Jamestown, as wives for the settlers.

75. *What valuable plants were discovered in America?*

Indian corn, potatoes and tobacco.

76. *When was the first Indian plot to massacre the English?*

In 1609, but the massacre was prevented by Pocahontas, who revealed the plot to the people of Jamestown.

77. *When was the first massacre in Virginia? The second?*

In 1622, when in one hour 347 men, women and children were massacred. The second was in 1644, when 300 were killed; this plot was originated by Opechancanough, and was intended to exterminate the English settlers.

78. *Who was Nathaniel Bacon? What was the cause of Bacon's rebellion?*

A patriotic young lawyer, who rallied a company and defended the settlements against the Indians; he was denounced by Governor Berkeley as a traitor for acting without orders. During the contest which followed, Berkeley was driven out of Jamestown, and the village partially burned. In the midst of this struggle Bacon died.

79. *When and where was the first Colonial Assembly?*

June 28, 1619, at Jamestown. It consisted of the governor, council and deputies, or "burgesses," chosen from the various plantations.

80. *Who was King Philip?*

King Philip was an Indian chief, the son of Massasoit, who, becoming jealous of the intrusion of the whites, planned a confederation of the Indian tribes against these intruders.

81. *When was King Philip's war?*

The war began in 1675, continuing about one year. King Philip was shot by an Indian, an ally of the English, in 1676.

82. *What were the Navigation Acts?*

In 1660 the British Parliament ordered that the commerce of the colonies should be carried on in English

vessels, and their tobacco and all other products shipped to England. In fact, American manufactures were prohibited, and nothing allowed to be done that would enter into competition with the people of England.

83. *What was the effect of these laws?*

These laws bore very heavily on the people, causing great discontent, and were one of the causes which led to the Revolution.

84. *Were the Navigation Acts observed in Massachusetts?*

No. An officer was sent to enforce them, but without success. Charles II seized upon the excuse thus offered, and made Massachusetts a royal province. The king died before his plan was completed, but James II, in 1686, declared the charters of all the New England colonies forfeited.

85. *Who was Sir Edmond Andros?*

The first royal governor of New England. He was sent by James II. The colonies endured his oppressions for three years, when, learning that his royal master was dethroned, they revolted and imprisoned him.

86. *From what was derived the appellation of* Charter Oak?

When James II declared that the charters of all the New England colonies were forfeited, Connecticut refused to surrender hers. Governor Andros demanded the charter of the assembly then in session at Hartford, and during the debate which ensued the lights were suddenly extinguished, and the charter was seized by William Wadsworth and hidden in the hollow of an old oak, which since that time has been called the Charter Oak.

87. *Who was Sir William Phipps?*

The second royal governor of Massachusetts, or a province embracing Massachusetts, Maine and Nova Scotia.

88. *What were the results of the so-called "Salem witchcraft"?*

A superstition prevailed that persons were subject to the control of invisible evil spirits, and it is estimated that some 200 persons were accused, 150 imprisoned, 28 condemned, 19 hanged, and one pressed to death.

89. *What was the cause of the Pequot war? How did it end?*

The Indians had become troublesome and dangerous to the early settlers of Connecticut, who resolved to make war upon the Pequots. A battle took place at Mystic River, where the tribe was nearly annihilated; those Indians who were not killed were captured and made slaves, or escaped and joined other tribes.

90. *What name did the Dutch give their colony on Manhattan Island?*

New Amsterdam.

91. *How was this island obtained?*

It was purchased of the Indians for about $24.

92. *Give a short history of the early government of New York.*

After the discovery of the Hudson River, the West India Company obtained of the Dutch government a grant of New Netherlands, and settlements were made at New Amsterdam and Port Orange, now the city of Albany. For twenty years New York was subject to Indian butcheries, varied by difficulties with the Swedes on the Delaware and the English on the Connecticut. In September, 1664, an English fleet came to anchor in the harbor of New Amsterdam, and demanded the surrender of the town. Peter Stuyvesant, the last and ablest of the four Dutch governors, plead with the council to fight, but in vain. They wished for English rule. The surrender was signed, and the

colony was named New York. The English governors did not satisfy the people, so that when, after nine years of English rule, a Dutch fleet appeared in the harbor, the people went back quietly under their old rulers. The next year peace was declared between England and Holland, and New Amsterdam became New York again. Andros now became governor, and New York remained a royal province until the Revolution.

93. *When and by whom was Connecticut settled?*

In 1636, by a company of persons from Massachusetts, with their minister, Mr. Hooker. Their settlements were at Windsor, Hartford and Wethersfield.

94. *By whom was the first settlement in New Hampshire made?*

By the Rev. Mr. Wheelright and a few followers, who were also banished from Massachusetts on account of their religion.

95. *Who made the first settlement in Maine?*

Ferdinand Georges, in 1636.

96. *From what did its early colonists greatly suffer?*

From the hostilities of the Indians.

97. *Why were the Indians so hostile and barbarous?*

Because of the treachery of the early explorers, several attempts being made by the whites to kidnap Indians and take them to Europe as slaves. The Indians sought vengeance.

98. *When and by whom was Philadelphia founded?*

In 1683 William Penn purchased the land of the Swedes. The name, derived from two Greek words, signifies Brotherly Love.

99. *Who was William Penn?*

A Quaker, who, with a band of followers, had settled in Pennsylvania in 1682, buying lands of the Indians.

100. *Why did Lord Baltimore obtain a tract of land north of the Potomac River?*

To secure for the Roman Catholics a refuge from the persecutions which they were then suffering in England.

101. *What was the cause of Claiborne's rebellion?*

The Virginia colonies claimed that Lord Baltimore's grant covered territory belonging to them. Claiborne, a member of the Jamestown council, having established two trading-posts in Maryland, prepared to defend them by force. On the eve of a battle he fled to Virginia, and his party was defeated. Claiborne was tried for treason, but acquitted. Ten years afterward he came back, headed a revolt, and drove Lord Baltimore, then governor of Maryland, out of the colony. Lord Baltimore returned with a large force, and Claiborne fled.

102. *After this rebellion, what was the condition of Maryland?*

The Protestants, having obtained a majority in the assembly, excluded Catholics from their rights, assailed their religion, and even declared them outside the protection of the law. Civil war ensued. At one time two governments were sustained, one Protestant and the other Catholic. In 1691 Lord Baltimore was entirely deprived of his rights as proprietor, and Maryland became a royal province. In 1715 a later Lord Baltimore recovered the government, and religious toleration was again restored.

103. *To whom does the honor of having first established religious freedom in America belong?*

To the Roman Catholics of Maryland, by the "Toleration Act" of 1649.

104. *By whom was Delaware settled? Where and when? What transpired a few years after their settlement?*

By the Swedes and Finns, in 1630, near the entrance of Delaware Bay, where they laid the foundation of Lewiston,

the oldest town in the State. After a few years, Governor Stuyvesant of New Netherlands conquered their colony.

105. *What European wars disturbed the American colonies?*

King William's war in 1689, Queen Anne's in 1702, and King George's in 1744.

106. *What was King William's war, and how long did it last?*

In 1689 war broke out in Europe between England and France. The contest extended to the American colonies, and lasted seven years.

107. *What was the condition of the colonies during Queen Anne's war?*

Queen Anne's war lasted eleven years. The New England frontier was again desolated; remote settlements were abandoned; the people betook themselves to palisaded houses, and worked their farms with their guns always at hand.

108. *Were the colonies much affected by King George's war?*

They were not. The only event of importance was the capture of Louisburg, on the island of Cape Breton. Peace being established, England gave back Louisburg to the French.

109. *What part did the Indians usually take in these wars?*

They assisted the French against the English.

110. *Which of the colonies suffered mostly in early warfare?*

Virginia, Massachusetts, Connecticut and New York.

111. *Which of the colonies was free from Indian warfare?*

Pennsylvania.

112. *Which was the only treaty with Indians never sworn to, and the only one never broken?*

William Penn's treaty with the Indians.

113. *Name the thirteen colonies.*

Virginia, New York, New Jersey, Massachusetts, New Hampshire, Maryland, Connecticut, Rhode Island, Delaware, Pennsylvania, North Carolina, South Carolina and Georgia.

114. *When and where were Harvard and Yale Colleges founded?*

Harvard was founded at Cambridge, Mass., in 1638; Yale at New Haven, Conn., in 1701.

115. *When and by whom was the first newspaper started in America? Who was the first American editor?*

The *Boston News Letter* was established in 1704 by Bartholomew Green. John Campbell was the first American editor.

116. *In 1741, what caused great excitement in New York City?*

The supposed negro plot to burn New York and make a negro governor.

117. *Who was John Eliot?*

A minister who labored among the Indians, and for his devotion was called the Indian Apostle; he also translated the Bible into an Indian written language.

118. *Who was William Kidd?*

A man sent out by England to suppress piracy in 1696. He turned buccaneer, was captured in Boston in 1699, sent to England, condemned and hanged.

119. *By whom was North Carolina settled?*

In 1650, near Albemarle Sound, by a colony from Virginia.

120. *When was South Carolina settled?*

In 1689, at Charleston, principally by Huguenots.

121. *In 1700, what valuable plants were introduced into this country?*

Cotton and rice.

122. *When and by whom was Georgia settled?*

In 1732, by James Oglethorpe, who began a settlement where Savannah now stands.

123. *Why was it called Georgia?*

In honor of George II, then king of England.

124. *From what nation came the great mass of the early settlers of the United States?*

From England, though there were considerable numbers of Dutch, French, Scotch, Irish, Swedes and Germans.

125. *Where were the different nationalities found in the colonies?*

The Dutch were mostly in New York; the French in New York and South Carolina; the Scotch and Irish in East Jersey, the Carolinas and Georgia; the Swedes on the Delaware; the Germans in Pennsylvania and North Carolina.

126. *In what occupations were the settlers of New England engaged? Those of the Middle States? Those of Virginia and Maryland? Those of Georgia and Carolina?*

In New England the settlers were engaged in farming, lumbering, manufacturing, ship-building and fisheries; in the Middle States chiefly in farming; in Virginia and Maryland in farming, tobacco being the staple product; in Georgia and Carolina in rice-raising near the coast, and in general farming on the high lands, where cotton was cultivated on a small scale.

127. *What colony and town stood first in commerce?*

The colony of Massachusetts and the town of Boston.

128. *What were the populations of New York, Philadelphia and Boston?*

Boston and New York had about 18,000 each. Philadelphia about 25,000.

129. *Why had Virginia no large towns?*

The water-ways through Chesapeake Bay and many large rivers brought ships into direct communication with many plantations, which facilitated exchange and dispensed with the need of central markets, so that the colonists did not collect in large towns.

130. *In these times how was trade carried on?*

Mainly by barter.

131. *What was used instead of currency?*

In Virginia, for a long time, tobacco was used as money; in New England wampum, made of shells; in New York beaver-skins.

132. *In what money were accounts kept?*

English — pounds, shillings and pence.

133. *How did the use of dollars and cents become established?*

By the demand for money in the time of the Revolution.

134. *What were the general manners and customs of the early settlers?*

Primitive. The people did their own weaving and made their own clothing, and all were required to dress within their means. Their food was abundant, but simple, and their houses were mostly log cabins. Everything wore an air of industry and thrift.

135. *What religious beliefs existed in the colonies?*

Christianity in some form was found everywhere. In Maryland the Roman Catholic Church was uppermost; in Virginia and South Carolina the Church of England. In New England the doctrine was Calvinistic and the form

of church government Congregational; while in New York the Reformed Dutch Church was supreme. The Quakers predominated in Pennsylvania, Delaware, Rhode Island and New Jersey. Roger Williams had established at Providence the first Baptist Church in America. The French Protestants, or Huguenots, were found in considerable numbers in New York and largely in Carolina.

136. *Give an account of religious persecutions in that day.*

A war of sects was waged in several of the colonies, the people seeming to forget their ideas of tolerance and religious equality as they prospered. The Puritans imprisoned Baptists and put Quakers to death. The Churchmen in Virginia banished Puritans and imprisoned Baptists. The Protestants of Maryland disfranchised the Catholics. But as years passed, the tolerant spirit was gradually restored.

137. *Under what dominion were the colonies?*

Under the crown of England.

138. *What were proprietary governments? Give examples of them.*

Where the province was under some proprietor, by grant to an individual or association from the king. Pennsylvania under William Penn, and Maryland under Lord Baltimore, are examples.

139. *Describe* (a) *royal government,* (b) *charter government,* (c) *voluntary association.*

(*a*) Royal government was that conducted directly by the crown through the appointment of a royal governor. (*b*) Charter government was where the colony was governed by a code of laws enacted expressly for them and called a charter; this written instrument granted certain political rights and privileges. (*c*) Government by voluntary association was where the people organized themselves into a body politic without authority of privilege from the crown.

140. *Who were the founders of American literature?*

Increase Mather, one of the early presidents of Harvard College, and his son Cotton Mather.

141. *What was the first important book written by a native American?*

Cotton Mather's "*Magnalia*," a religious history of New England.

142. *What influence had the pulpit in the education of the people in colonial times?*

It had great influence, as many of the ministers were men of superior scholarship. They did not deal wholly in religious dogmas, but led and inspired the people, kept patriotism aflame, watched the encroachments of British despotism, and moulded national character.

143. *When were post-offices first established?*

In the year 1693 Parliament voted to establish post-offices in the colonies, and Thomas Neale was authorized to transmit letters and packets "at such rates as the planters should agree to give."

144. *What great men did the colonial times produce? What notable sentiment was uttered by James Otis?*

Jonathan Edwards, theologian; Benjamin Franklin, philosopher and statesman; James Otis and Patrick Henry, orators. After the passage of the Stamp Act by Parliament, James Otis said: "To my dying day I will oppose, with all the powers and faculties God has given me, all such instruments of slavery on the one hand and villainy on the other." "Then and there," said John Adams, "the trumpet of the Revolution was sounded."

145. *Where and when was the first permanent settlement in the Mississippi Valley?*

At Kaskaskia, in Illinois, about 1690.

146. *What was the cause of the French and Indian war, and who were the parties to it?*

The cause was disputed territory, and the parties were the French and Indians against the English.

147. *Where was the disputed territory?*

West of the Alleghany Mountains, along the Ohio River and the northern lakes.

148. *Who was sent to request the French to withdraw from the territory on the Ohio?*

George Washington.

149. *What was the result of Washington's endeavor to compel the French to abandon the Ohio River territory?*

After some successes Washington marched to a place called Great Meadows, where he built Fort Necessity. Early in July, 1755, the fort was attacked by the whole French and Indian force, but was so stoutly defended that the French commander, Count de Villiers, raised a flag of truce. Washington finally gave up the fort, but was permitted to march away with all the honors of war.

150 *How were Washington and his soldiers rewarded by the legislature of Virginia?*

A vote of thanks was passed, and each soldier was to receive a *pistole.*

151. *After Washington's return, what general was sent in his place against the French?*

Gen. Braddock, with a select force of 1,200 men.

152. *What was the result of Gen. Braddock's expedition?*

When within a few miles of Fort du Quesne (now Pittsburg, Pa.) he was surprised by a body of French and Indians in ambush. Braddock was mortally wounded, and nearly all his officers and half his troops were killed. Braddock was buried during the retreat, and Washington ordered

the wagons to pass over his grave and obliterate it so that his body might not fall into the hands of the Indians.

153. *Who was the only mounted officer saved in this expedition?*

Washington, although four bullets pierced his coat and two horses were shot under him.

154. *Was the next expedition against Fort du Quesne successful?*

Gen. Forbes led this expedition. Washington commanded the Virginia troops. After the capture of the fort it received the name of Pittsburg, in honor of William Pitt.

155. *At what points outside of the Ohio country did the colonists attack the French?*

At Louisburg, Quebec, Crown Point and Niagara.

156. *What success had the English in their campaign against Acadia?*

The French forts at the head of the Bay of Fundy were quickly taken, and the region east of the Penobscot fell into the hands of the English. Gen. Loudoun planned an attack on Louisburg, but, learning that the French fleet contained one more ship than his own, gave it up. The next year Gens. Amherst and Wolfe captured the city after a severe bombardment, and took possession of the entire island.

157. *What did they do at Crown Point and Ticonderoga?*

The English under Johnson met the French commanded by Dieskau near the head of Lake George, where a battle was fought, the English being victorious. Johnson, after building a fort which he called William Henry, feared defeat if he attempted to take Crown Point, and returned to Albany.

158. *Describe the attack on Ticonderoga.*

On a calm Sunday morning, about four months before the fall of Fort du Quesne, Gen. Abercrombie, with a thousand boats full of soldiers, with waving flags and martial music, swept down Lake George to attack Ticonderoga. The result was a disastrous repulse. The next year, 1759, at the approach of Gen. Amherst with a large army, both Ticonderoga and Crown Point were evacuated.

159. *Were the English successful at Niagara?*

Gen. Shirley reached Oswego, but after hearing of the disastrous defeat of Braddock, was discouraged, and only stopping to build a fort came home. Four years after Niagara surrendered to the English.

160. *Who were the commanders at the battle of Quebec?*

Gen. Wolfe commanded the English, and Gen. Montcalm the French.

161. *How was Quebec taken?*

Gen. Wolfe, while reconnoitering, observed a narrow path winding among the rocks to the top. At night he descended the river, while his men landed, climbed the steep cliff and seized the guards, and at break of day stood with his entire army drawn up in order of battle on the Plains of Abraham. A desperate battle followed; on September 13, 1759, five days later, the city surrendered.

162. *What generals were killed at the capture of Quebec, and what were their dying words?*

Both Wolfe and Montcalm. Wolfe, when informed that the French were running, exclaimed: "Now God be praised; I die happy!" Montcalm, when told that his wound was fatal, replied: "So much the better; I shall not live to see the surrender of Quebec."

163. *What was the treaty of peace between France and England?*

France gave up all the territory east of the Mississippi, except two small islands south of Newfoundland, retained as fishing stations. In this treaty Spain ceded Florida to England, and France ceded to Spain New Orleans and all the territory she claimed west of the Mississippi.

164. *What were the cause and results of Pontiac's war?*

When the English took possession of the western forts great discontent arose, for the French had won the hearts of the Indians. Pontiac, a chief of the Ottawas, formed a confederation of the tribes against the English. Eight forts were surprised and captured, and thousands of persons fled from their homes to avoid the scalping-knife. By a disagreement among the Indians the confederation was broken and a treaty signed.

165. *In the French and Indian war, what was the most remarkable battle?*

The capture of Quebec.

166. *What were the effects of this war?*

It cost the colonists $16,000,000, of which only $5,000,000 was repaid by England. They lost thirty thousand men, suffered the untold horrors of Indian warfare, and taxes were sometimes equal to two-thirds of the income of the tax-payer; but they learned to think and act independently of the mother-country.

167. *At the close of the French and Indian war, what was the population of the colonies?*

About 2,000,000.

168. *What were the chief causes which led to the American Revolution?*

The colonies were unjustly taxed, and not allowed representation in Parliament.

169. *What were Writs of Assistance?*

Warrants authorizing the king's officers to search for smuggled goods. This gave the custom-house officers power to enter a man's house or store at pleasure. The colonists resisted such power as a violation of their legal rights.

170. *What was the Stamp Act, and when was it passed?*

It was a law requiring that to all bonds, deeds, newspapers, pamphlets, etc., there should be attached a stamp purchased of the tax authorities of the British crown. It was passed by Parliament in 1765.

171. *Who was Patrick Henry?*

A Virginian who with boldness and eloquence distinguished himself by his opposition to the Stamp Act.

172. *After the repeal of the Stamp Act, what attempt was made to tax the colonies?*

A duty was laid on all tea, glass, paper and painters' colors which should be imported.

173. *Who were the Sons of Liberty?*

In order to resist the Stamp Act, associations called Sons of Liberty were organized, and delegates from nine of the colonies met at New York and framed a Declaration of Rights, and a petition to the king and Parliament. November 1 was the date appointed for the law to go into effect, and on that day the people set aside all business, bells were tolled, flags were lowered to half-mast, and stirring speeches by the great orators of the times aroused the people over the whole land.

174. *What was the Mutiny Act?*

A law requiring that the colonies should furnish the British soldiers with quarters and necessary supplies. This act aroused the indignation of the Americans. To be taxed was bad enough, but to be forced to shelter and feed their oppressors was unendurable.

175. *What event occurring in Boston received the name of "Boston Tea Party"?*

Vessels containing nearly 350 chests of tea were boarded by Americans disguised as Indians, and the tea was thrown into the harbor.

176. *What was the Boston Port Bill?*

An act of Parliament forbidding the landing of goods in Boston.

177. *What was the Boston Massacre?*

A small guard of British soldiers passing through the streets of Boston were so exasperated by the jeers and taunts of a crowd of men and boys, that they fired, killing three persons and wounding several others.

178. *When and where did the first General Congress of the colonies assemble, and what action did it take?*

The first Continental Congress was held at Philadelphia, September 5, 1774. It voted not to obey the recent acts of Parliament; protested against standing armies being kept in the colonies without consent of the people; sustained Massachusetts in her resistance, and agreed to hold no intercourse with Great Britain.

179. *Why do we cherish the name Faneuil Hall? Where is it? By what other name is it known?*

Faneuil Hall, in Boston, was a great rendezvous of the Revolutionary patriots. Powerful speeches were made in this hall for the cause of freedom, and from this it acquired the title of the "Cradle of Liberty."

180. *What was the public feeling in England?*

Public feeling was generally against the colonies. "Every man," wrote Dr. Franklin, "seems to consider himself as a piece of a sovereign over America; seems to jostle himself into the throne with the king, and talks of *our* subjects in the colonies."

181. *Were the people all united in their protestations against the English government? By what party names were they known?*

They were not. Those who still remained loyal to the king were termed Tories, and those in opposition Whigs.

182. *Who was Paul Revere?*

A daring patriot, who, at the outbreak of the Revolution, performed valuable services in rousing the people in the country and villages.

REVOLUTIONARY WAR.

183. *Who had command of the British army at the commencement of the Revolution?*

Gen. Gage.

184. *When and where was fought the first battle of the Revolution?*

April 19, 1775, at Lexington, a few miles from Boston.

185. *Describe the battle of Lexington.*

Gen. Gage, learning that the people were gathering military stores at Concord, sent eight hundred British soldiers to destroy them; at Lexington a skirmish occurred in which seven Americans were killed. After destroying the stores, the troops hastily retreated, followed by the militia, who were eager to avenge the death of their countrymen. In their retreat to Boston the British lost nearly three hundred men.

186. *What effect had this battle?*

The effect was like wild-fire. American blood had been shed. Patriot avengers came pouring in from all sides. Grey-headed fathers and mothers sent their boys to battle.

187. *Who was Israel Putnam? What nickname was given him?*

A Connecticut farmer who, when notified of the battle of

Lexington, immediately left his plow, mounted his horse and rode to Boston, a distance of 100 miles, without leaving his saddle. His great courage and patriotism was of vast assistance to the cause of freedom. He was familiarly known as "Old Put."

188. *What were some of Putnam's narrow escapes?*

The story of his entering a wolf's den and shooting the animal by the glare of his eyes serves to show his love of bold adventure. At Fort Edward he alone, when all others fled, saved a magazine containing three hundred barrels of gunpowder from approaching flames, at the cost of being terribly burned. In one encounter he received fourteen bullet holes in his clothing. The British vainly offered him money if he would desert the American cause.

189. *When and where was the battle of Bunker Hill? Describe it.*

June 17, 1775, on Breed's Hill, in Charlestown. It was the intention of Gen. Ward, who commanded the patriots, to fortify Bunker Hill in the night, but by some mistake Breed's Hill was selected. At daylight the British were startled by seeing the redoubt which had been constructed, and the officers immediately decided to drive the Americans from their position. Three thousand troops under Gen. Howe were formed into line and slowly ascended the hill. No move was made by the patriots until the British were within ten rods. Then a blaze of light shot from the redoubt, and whole ranks of the enemy fell. The survivors, unable to endure the terrible slaughter, broke and fled.

A second charge was but a repetition of the first; but on the third the ammunition of the patriots became exhausted and they were driven from the field.

190. *Who were the commanders in this battle? What was the force of each army, and the loss?*

Gen. Howe commanded the British army. It is uncer-

tain who commanded the Americans, but generally historians give Col. Prescott the credit. The British force, which numbered 3,000, lost 1,000; the Americans had a force of 1,500, and lost 450.

191. *What American general was killed in this battle?*

Gen. Warren. This gallant soldier was among the last to leave the field of battle, and while he was trying to rally the troops, a British officer who knew him seized a musket and shot him dead.

192. *How did the Americans regard the battle of Bunker Hill?*

The effect was that of a victory, as the untrained farmer-soldiers had met the seasoned troops of the British army, had repulsed them twice with great slaughter, and but for the lack of ammunition would have been victorious.

193. *What two forts were captured by the Americans in May, 1775.*

Ticonderoga and Crown Point.

194. *To whom did these forts surrender?*

To Ethan Allen and Benedict Arnold, respectively.

195. *What did Allen say when asked by what authority he demanded the surrender of Ticonderoga?*

"I demand it in the name of the Great Jehovah and the Continental Congress."

196. *Who were termed "Green Mountain Boys"?*

During a controversy between New Hampshire and New York, over lands claimed by each party, Col. Ethan Allen became conspicuous in the cause of New Hampshire, and the recruits under him were called the "Green Mountain Boys." It is now applied to the men of Vermont.

197. *When did the second Continental Congress assemble, and what did it do?*

On May 10, 1775. It voted to raise and equip 20,000 men, and give the command to Gen. Washington.

198. *When did Gen. Washington take command of the American army, and how large was his force?*

July 3, 1775, at Cambridge, Mass. His force was 14,000 men.

199. *What was the result of the American attack on Canada?*

It was unsuccessful, suffering a defeat at Quebec, where Gen. Montgomery, the American general, was killed.

1776.

200. *How did Washington force the British to evacuate Boston?*

By sending a force at night to fortify Dorchester Heights. These overlook Boston, and Howe, remembering the lesson of Bunker Hill, decided to leave. The next day, March 18, 1776, Washington entered the city amid great rejoicing.

201. *Describe the attack on Fort Moultrie.*

On June 28, a British fleet under Admiral Parker opened fire on Fort Moultrie. The response from Moultrie's guns was so fearful that the fleet was badly damaged, and it withdrew and sailed for New York.

202. *What daring feat was accomplished by Sergeant Jasper in this attack?*

Early in the action the flagstaff was struck by a ball; Jasper leaped over the breastworks, caught up the flag, and springing back tied it to a sponge staff, and replaced it in its former position.

203. *Who introduced in Congress the resolution that* "the United Colonies are, and ought to be, free and independent States"?

Richard Henry Lee of Virginia, June 7, 1776.

204. *Who were appointed to draw up a declaration of rights?*

Thomas Jefferson, John Adams, Benjamin Franklin, Roger Sherman, and Robert R. Livingston.

205. *When was the Declaration of Independence accepted by Congress?*

July 4, 1776.

206. *What did this declaration assert?*

That the thirteen United States of America were free and independent.

207. *When was it signed, and by how many persons?*

August 2, 1776, by all the members of Congress, numbering fifty-six.

208. *What became necessary after this declaration?*

That articles of government should be drawn.

209. *What were these articles called, and when were they to take effect?*

Articles of Confederation, and they were to take effect when ratified by all the States.

210. *Were they ratified by Congress immediately?*

No; delays and objections arose, but they were established in March, 1781.

211. *Which State was the last to give her consent?*

Rhode Island, in 1790.

212. *Why were the articles of confederation not adapted to the general wants of the government?*

Because they gave no real power to Congress, which

could only recommend what should be done. Congress could borrow money, but was not empowered to pay it; could declare war and determine how many troops should be raised, but could not levy taxes to defray expenses, or compel the States to raise the troops.

213. *When was the battle of Long Island fought, and with what result?*

On August 27, 1776, the Americans being compelled to withdraw, closely pursued by the British under Gen. Howe.

214. *In the retreat of Washington, through what places did he pass?*

North by way of Harlem, White Plains and Chester, then southwest through New Jersey to the Pennsylvania side of the Delaware River.

215. *When was the battle of White Plains fought, and who was victorious?*

October 28, 1776. Neither side was victorious, although Washington retreated when the British received reinforcements.

216. *What was the feeling of the colonists at this time?*

They were discouraged and heartsick. In the three weeks' retreat of Washington the soldiers were poorly clad and many of them barefooted. Often their blood-stained footprints were left on the frozen ground. It was a season of great adversity, and tried the patriotism of the new government. Many people of wealth and influence went over to the British side.

217. *What daring exploit was undertaken by Washington near the close of the year 1776?*

He crossed the Delaware River on the night of December 25, proceeded to Trenton, and in the early morning captured one thousand Hessians and a large quantity of

arms with the loss of only four men, two killed and two frozen to death.

218. *What was the effect of this feat?*

It was considered the great military exploit of the Revolution. Its effect was electrical. It revived the drooping spirits of army and people. Recruits flocked to the American standard, and the troops whose terms of enlistment had expired, agreed to remain. Such brilliant achievements of Washington astonished the British commander, and Cornwallis, who was about to return to England under the impression that the rebellion had been subdued, was ordered to remain and prepare for a winter's campaign.

219. *Why did Washington choose Christmas night to attack the Hessians?*

Knowing that the Germans regarded this day as one of great festivity, he believed they would not expect an attack, and in the midst of their carousals could be surprised and routed.

220. *When and by whom were the islands of Rhode Island captured?*

December 8, 1776, by Sir Peter Parker.

1777.

221. *At the opening of the year 1777, how many British armies were in America?*

There were three, one of 35,000 men, under Gen. Howe, whose headquarters were in New York; one of 7,000 in Canada, under Sir Guy Carleton; and one of 5,000 in Rhode Island, commanded by Gen. Prescott.

222. *What battle soon followed Washington's success at Trenton?*

The battle of Princeton, Jan. 3, 1777, which was one of the most brilliant contests during the whole war. The

Americans were successful. That night Washington left his camp-fires burning to deceive the enemy, and by a circuitous route passed the British, fell upon the troops near Princeton, routed them, took three hundred prisoners, and by rapid marches reached Morristown Heights in safety.

223. *What was Cornwallis's mistake in connection with this achievement of Washington?*

He was urged by other officers to attack Washington that night, but believing it an impossibility for him to escape, he declined, saying he could "catch the fox in the morning." At daybreak the sound of cannon in the direction of Princeton aroused Gen. Erskine, who exclaimed, "To arms, General! Washington has outgeneraled us; let us fly to the rescue at Princeton!"

224. *What great compliment was given to Washington by Frederick the Great of Prussia?*

He declared that the achievements of Washington and his little band, during the six weeks following Christmas, were the most wonderful recorded on the pages of military annals.

225. *During the summer following the battle of Princeton, what occurred between the British and Americans?*

Little of importance. Howe waited for an attack, but finding Washington apparently on the defensive set out to force an engagement, which by the adroit movements of the Americans was prevented. Finding these attempts unsuccessful, Howe suddenly changed his plans, embarked eighteen thousand men on his brother's fleet and set sail for Chesapeake Bay.

226. *What was the force of Washington's army?*

It numbered only eleven thousand men; but with this small army Washington resolved to hazard a battle for the defence of Philadelphia.

227. *What noted French Marquis joined the Americans at this time, and what obstacles did he overcome in order to offer his services to the American Congress?*

Marquis de La Fayette. He was not yet twenty years of age and had just married. He had brilliant social prospects and carried out his plan in defiance of the objections of his family, the protestations of the British Minister and the refusal of the king to grant him the necessary permission. Undaunted, he purchased a vessel with his own money, fitted it out, and, by evading the officers sent to detain him, crossed the ocean and hurried before Congress, where he asked permission to serve as a volunteer without pay. His valor won for him a commission as Major-General before he was twenty-one.

228. *When was the battle of Brandywine fought, and who was victorious?*

September 11, 1777; Washington was defeated, retreating to Philadelphia.

229. *When did Philadelphia surrender to the British?*

September 26, 1777, without opposition.

230. *Where did Washington attack the British soon after his retreat from Philadelphia, and with what result?*

At Germantown, October 4, meeting with defeat, and losing 1,200 men.

231. *What was one of the most daring and remarkable exploits of this period of the war, and how accomplished?*

The seizure of the British General Prescott by Col. Barton, who, with forty selected soldiers, crossed Narragansett Bay in the night to the island, where the British army was encamped, proceeded to Gen. Prescott's lodgings, captured him and returned.

232. *What was the chief object of taking Gen. Prescott, and was it accomplished?*

To have an officer of equal rank with Gen. Charles Lee, that an exchange might be effected. The plan was successful.

233. *Where did the British army go into winter quarters, and what was their condition in the spring? What did Dr. Franklin wittily remark of them?*

At Germantown. The winter was spent in such continued festivities that they were sadly demoralized. Because of this demoralization, Franklin said that "Howe has not taken Philadelphia so much as Philadelphia has taken Howe."

234. *Who was Lydia Darrach?*

A Quaker woman, who revealed to Washington a plot that the British had arranged to attack him.

235. *What cheering offset to Washington's defeat greeted the Americans?*

The brilliant achievements of the Americans in the north.

236. *Who invaded the United States from Canada?*

Gen. Burgoyne, with 10,000 British troops and Indians.

237. *What success did he have?*

He captured Forts Crown Point, Ticonderoga and Edward, and the supplies at Whitehall. These successes created general consternation among the American colonists. Militiamen from the neighboring States were rapidly collected, and under the command of Lincoln, Arnold and Morgan, were dispatched to check the advance of the British.

238. *Who commanded the northern division of the American army? Who the British?*

Gen. Gates commanded the Americans, and Gen. Burgoyne the British.

239. *What stratagem did Arnold resort to, in order to rout the British, and relieve Fort Stanwix?*

He sent a half-witted boy into the camp of the British, who spread the report that a large body of Americans was close at hand. When asked their number, he could only answer by pointing to the leaves of the trees. The Indians and the British were so frightened that they fled immediately.

240. *At the battle of Bennington, how did Gen. Stark inspire his troops, and with what result?*

As the British lines were forming for the attack, he exclaimed: "There are the red coats! We must beat them to-day, or Mollie Stark is a widow." They gained a victory, and took six hundred prisoners.

241. *What battles were fought by Gates and Burgoyne? Who won them?*

The two battles of Stillwater, or Saratoga, on September 19 and October 7, 1777; the Americans were successful.

242. *When, where and to whom did Burgoyne surrender?*

October 17, 1777, at Saratoga, to Gen. Gates.

243. *What was the agreement in this surrender?*

That the British should give up their arms and ammunition, return to England, and engage no more in the war.

244. *In this campaign, what noted foreigner tendered his assistance "to fight as a volunteer for American independence"?*

Gen. Kosciusko, a Pole of noble birth.

245. *What patriotic remark did Gen. Stark make when informed, after the battle of Bennington, that one of his five sons had been unfortunate?*

"Has he proved a coward or a traitor?" "Worse than that," was the answer; "he has fallen, but while bravely fighting." "Ah!" said the father, "then I am satisfied."

246. *What was the Conway Cabal plot?*

A plot, originating in Congress, to put Washington out of command of the army. When the people heard of it they were so indignant that those who proposed it were glad to sink into silence.

247. *When did Congress adopt the Articles of Confederation?*

In November, 1777.

248. *Where did Washington quarter his troops during the Winter of 1777–1778, and what was their condition?*

In Valley Forge. The men were encamped in cold, comfortless huts, with little or no clothing. Many were barefooted, few had blankets, and straw could not be obtained. Sickness attacked the camp, and for want of suitable food and medicines many of the sufferers died.

1778.

249. *What move was now made by England to effect a reconciliation?*

They sent commissioners with liberal proposals, but the day was past for any negotiation which did not recognize the colonies free and independent.

250. *When Gen. Reed, of Pennsylvania, was offered ten thousand guineas and high honors to seek a negotiation of peace, what did he say?*

"I am not worth purchasing; but such as I am, the king of Great Britain is not rich enough to buy me!"

251. *Who were appointed by Congress to solicit aid from the French government?*

Benjamin Franklin, Silas Dean and Arthur Lee.

252. *When and where was the treaty of alliance formed?*

At Paris, February 6, 1778. It was ratified by Congress May 4.

253. *What assistance was sent by France in the spring?*

A French fleet under Count d'Estaing.

254. *How long did the British hold Philadelphia?*

About nine months, withdrawing their forces June 18, 1778.

255. *Where did Congress assemble while the British held Philadelphia?*

At Lancaster and York, Pennsylvania.

256. *When and where was the battle of Monmouth fought, and who were victorious? What heroic achievement was performed by a woman in this battle?*

June 28, 1778, in the eastern part of New Jersey. Both parties claimed the victory, but the British withdrew their troops. The day was sultry and hot. During this battle an artilleryman was shot at his post. His wife, Mary Pitcher, saw him fall, and hearing the commander order the piece to be removed from the field, she hastened to the cannon, seized the rammer, and with great skill and courage performed her husband's duty.

257. *How was Mary Pitcher rewarded by Congress for her courage and patriotism?*

She was voted a sergeant's warrant with half-pay during her life.

258. *What is said of Gen. Charles Lee at the battle of Monmouth?*

Gen. Lee, in conducting the attack, became alarmed and ordered a retreat, which threw the troops into confusion. Washington coming up ordered a halt, bitterly rebuked Lee, and by his personal influence rallied the men and sent them back against the enemy. Lee being thus rebuked, wrote indignant letters to Washington, who gave them to Congress, who suspended Lee from the army. Lee retired to his estate and never rejoined the army.

259. *Describe the campaign in Rhode Island.*

A combined attack on Newport was agreed upon by Gen. Sullivan and Count d'Estaing with the French fleet. Soon after the arrival of d'Estaing in Narragansett Bay, Howe appeared off the harbor with the English fleet. An engagement was about to begin, when a terrible storm came up and both fleets were badly damaged, and retreated for repairs. Sullivan, being thus deserted, was obliged to retreat to prevent an encounter with Gen. Clinton, who came from New York with reinforcements.

260. *When did the massacre of Wyoming occur, and who directed it?*

July 3, 1778, under the direction of John Butler and Joseph Brandt at the head of 1,600 Tories and Indians.

261. *Describe this massacre.*

After the capture of the forts the Indians perpetrated the most barbarous massacre which their savage cruelty could devise, sparing neither women nor children and slaughtering the aged with the young. The entire valley was ablaze with burning buildings, and nothing that could be destroyed was allowed to remain.

1779.

262. *Who had charge of the American forces in the South in 1779, and who of the British?*

Gen. Lincoln commanded the Americans, Gen. Provost the British.

263. *At this time, where were Washington and Clinton?*

In the Northern States.

264. *What important posts on the Hudson were surrendered to the Americans in 1779?*

Stony Point and Paulus Hook.

265. *How were these posts taken, and by whom?*

Gen. Wayne, in the night of July 15, with unloaded guns and fixed bayonets, attacked Stony Point, carrying the works. Paulus Hook was surprised and taken by Major Lee on July 19.

266. *What was the result of the American attack on Savannah?*

A great loss to the American and French forces.

267. *In the siege of Savannah, what nobleman was mortally wounded?*

The Polish Count Pulaski.

268. *Up to this time, what had been the success of the American navy and privateers?*

They had captured more than five hundred ships; they had even cruised among the British Isles, and entering harbors seized and burned ships lying at the English and Scottish wharves.

269. *Who was John Paul Jones?*

A successful commander of the naval forces. His most memorable exploit occurred off the coast of Scotland, where his Bon Homme Richard captured the British Serapis. As the enemy carried the heavier guns, he lashed the two vessels together, and for two hours the crews fought hand to hand with musket, pike and cutlass. The Bon Homme Richard was worse damaged than the British suspected; but just as she was about to sink, the captain of the Serapis struck his colors, and Jones transferred his men to the captured frigate and sailed off with her.

270. *During this year, what attack was made by Gen. Sullivan?*

He was ordered by Washington to attack the Indians on the frontiers of New York and Pennsylvania. The

savages were everywhere defeated and forty of their villages were burned.

271. *What was the condition of the country at the close of the year 1779?*

There was a very despondent feeling. The Americans had gained no decisive victory, while the British had obtained control of much important territory. The finances of the government, also, were in a sad condition.

272. *What was Continental money?*

The paper currency issued by Congress. This issue amounted to $200,000,000, and became so depreciated that $40 in bills were worth only $1 in specie.

1780.

273. *In 1780, where were the military operations mostly carried on?*

In South Carolina.

274. *What was the result of the siege of Charleston?*

Gen. Lincoln was forced to surrender his troops, 2,000 in number, May 12, 1780.

275. *Who succeeded Lincoln in the command of the Southern forces, and who had command of the British?*

Gen. Horatio Gates succeeded Lincoln, and Lord Cornwallis had command of the British.

276. *When and where was the battle of Camden, who commanded, and who was victorious?*

Near Camden, South Carolina, August 16, 1780. The armies were commanded by Gates and Cornwallis, the Americans being defeated with a loss of 2,000 men.

277. *Who received command of the Southern army after the unsuccessful operations of Gen. Gates?*

Gen. Nathaniel Greene.

278. *What massacre was perpetrated by Col. Tarleton and his British troops?*

The massacre of Maxhaw Creek, where a body of 400 Americans were surprised, and after surrendering were massacred.

279. *What was the condition of the South after these reverses?*

As the States had been overrun by the British, there was no organized resistance to them.

280. *What fleet came to assist the Americans in July?*

A French fleet under the Chevalier de Ternay and Count de Rochambeau with 6,000 troops.

281. *Who was Benedict Arnold?*

An American traitor, who secretly agreed to betray West Point into the hands of the British.

282. *Who was Major André?*

A British officer, who was sent by Clinton to negotiate with Arnold.

283. *What were the names of the captors of André, and how were they rewarded?*

John Paulding, David Williams and Isaac Van Wart. Each received a pension of $200 for life and a silver medal bearing on one side the motto, "Fidelity," and on the other, "The love of country conquers."

284. *What were the words of Washington when the proofs of Arnold's treason were placed in his hands?*

"Whom can we trust now?"

285. *What became of Arnold and André?*

Arnold escaped to the British lines. André was hanged as a spy, at Tappan, N. J., October 2, 1780.

286. *How was Arnold rewarded for his treachery?*

He received about $30,000, a colonelcy in the British army, and the contempt of everybody.

287. *Who rendered gallant assistance in the South in the lawless attacks of the Tories, and often successfully routed small detachments of the British soldiers?*

Marion, Sumter, Pickens and Lee.

288. *What can be said of the courage, privations and hardships of these men?*

They were brave and patriotic, fighting without pay, food or clothing. They bore all the hardships and privations of warfare without a murmur. A British officer who was sent to negotiate with Marion for an exchange of prisoners was asked to dine with him. Finding the fare to consist only of roasted potatoes and salt, and that his host had neither bed nor blanket, he was so affected by this devotion to liberty that he resigned his commission, declaring that he would never fight against a cause with such defenders.

289. *What was the condition of the British armies at the close of the year 1780?*

They had two large armies well equipped: one under Sir Henry Clinton, with headquarters at New York, and the other in the south under Lord Cornwallis.

290. *What valuable assistance was rendered by Robert Morris, of Philadelphia?*

He gave three million rations to the soldiers. He loaned large sums of money, and even pledged his entire property as credit for the government. He also organized soldiers' relief associations, where private subscriptions were received, clothing was made, and encouragement given to renewed enlistment by soldiers whose time had expired. This patriot, so often the main support of Washington,

lost his fortune in his old age, and was confined in prison for debt.

1781–1788.

291. *When and where was the battle of Cowpens fought, and who was victorious?*

January 17, 1781, in South Carolina. The Americans under Gen. Morgan were successful, with a loss of only 80 men. The enemy's loss was 800.

292. *What successful operations were conducted by Gen. Greene in September?*

He attacked the British at Eutaw Springs, September 8, and so crippled the enemy that they retired toward Charleston.

293. *Did Gen. Greene ever gain a decided victory?*

No; but his defeats had all the effects of success, and Congress voted him the highest honors for his prudence, wisdom and valor.

294. *How was the war conducted at the North?*

With great brutality. Arnold, who had command of a British force, in Connecticut, burned much private as well as public property, and Cornwallis, after arriving and taking command, destroyed $10,000,000, worth of property.

295. *What event brought the war to a close?*

The surrender of Cornwallis at Yorktown.

296. *When and to whom did Cornwallis surrender?*

October 19, 1781, to Gen. Washington.

297. *When and where was the treaty of peace signed, and who were the commissioners who signed it?*

September 3, 1783, at Paris. The American commissioners were John Adams, Benjamin Franklin, Henry Laurens and John Jay. The British commissioners were Messrs. Fitzherbert and Oswald.

298. *When was peace proclaimed to the American army?*

April 19, 1783, just eight years after the battle of Lexington.

299. *Where and when did Washington resign his military commission?*

December 23, 1783, before Congress, which was assembled at Annapolis, Md. He then returned to his home at Mt. Vernon, Virginia.

300. *What was the condition of the country at this time?*

The Articles of Confederation did not meet the needs of the hour. Bitter jealousy existed between the several States with regard to each other and the general government. Continental money was much depreciated, and universal bankruptcy seemed almost inevitable.

301. *What notable foreigners gave their assistance to the Americans?*

The Marquis de La Fayette, Count de Grasse, Count de Rochambeau, Count d'Estaing, Count Pulaski and Chevalier de Ternay.

302. *What was the cause of the Shays Rebellion?*

In New England a large body of people refused to pay their taxes, and openly threatened to overturn the government. The rebellion, led by Daniel Shays, was put down by troops under Gen. Lincoln.

303. *When was the national flag adopted? Describe it.*

In 1777, by Congress. It is composed of thirteen stripes, alternate red and white, with a field of blue in the upper flag-staff corner, on which there is a star for every State. The breadth is two-thirds its length.

304. *When was the Constitution adopted?*

In 1788.

305. *After the adoption of the Constitution, where did Congress first meet?*

At New York, in April, 1789.

306. *What were the difficulties with which the new government had to contend?*

The treasury was empty, and the United States had no credit; the Indians were hostile; pirates from the Barbary States preyed upon our commerce; Spain refused us the navigation of the Mississippi; England had not sent a Minister to our government, nor had she made a treaty of commerce with us.

WASHINGTON'S ADMINISTRATION — 1789–1797.

307. *When was Washington inaugurated President of the United States?*

At New York, April 30, 1789.

308. *Where was the second session of Congress held?*

At Philadelphia, in 1790, where the seat of government was to remain until 1800.

309. *When did the city of Washington become the capital of the United States?*

In 1800.

310. *Who composed Washington's Cabinet?*

Jefferson was Secretary of State; Hamilton, Secretary of the Treasury; Knox, Secretary of War; and Randolph, Attorney-General.

311. *How was the credit of the United States put upon a firm basis?*

By the advice of Hamilton, taxes were levied on imported goods and on distillation of spirits, and a mint and national bank were established at Philadelphia.

312. *What did Daniel Webster say of Hamilton?*

"He smote the rock of the national resources, and abundant streams of revenue burst forth. He touched the dead corpse of public credit, and it sprang upon its feet."

313. *Who was appointed Minister to the United States from France? Why was he recalled?*

Citizen Genet, in 1793. The war which broke out between France and England induced Genet to try to rouse the American people to espouse the cause of France, and he even went so far as to fit out privateers in the ports of the United States to prey upon British commerce. Washington had great trouble in preserving neutrality. He saw that the true American policy was to keep free from European entanglements, and therefore demanded the recall of Genet.

314. *What great calamity visited the people of America in August, 1793?*

The yellow fever broke out in Philadelphia, and raged with such virulence that within three months, out of a population of 60,000, no less than 4,000 perished.

315. *What was the Whiskey Rebellion?*

The inhabitants in Western Pennsylvania were determined that no tax should be paid on whiskey, and they were so well organized that fifteen thousand troops had to be called out to subdue them.

316. *What difficulties now arose with the Indians, and what expeditions were sent against them?*

The early settlers of Ohio were much annoyed by their depredations, and Gens. Warner and St. Clair were sent against them, but were defeated with great slaughter. Gen. Wayne was now put in command, and in 1794 gained a complete victory, laying waste the entire Indian country.

317. *What was the condition of foreign affairs?*

Difficulties were arising with England in regard to the collection of debts in America and the impressment of our seamen. A treaty was made with Spain securing to the United States the free navigation of the Mississippi and fixing the boundary of Florida.

318. *What treaty was made with England in regard to English debts? How was this treaty received by the American people?*

Chief Justice Jay was sent as envoy extraordinary to England, where he negotiated a treaty which was ratified by the Senate in 1795 after a violent opposition. This treaty recognized the right to collect debts in the United States, but did not forbid the impressment of American seamen, a source of bitter complaint.

319. *What two political parties were now organized? Who were the leaders of these parties?*

The Republican party under the leadership of Jefferson, Madison and Randolph, and the Federalist party by Hamilton and Adams.

320. *What were the principles advocated by these parties?*

The Federalists favored the granting of broad powers to the general government, which they thought ought to be strong, while the Republicans, fearing lest the strength of the government should lead to a monarchy, advocated State rights as a safeguard against the usurpation of power. They also opposed the United States Bank, the English treaty and the assumption of the States' debts by the general government. In the campaign preceding the election of John Adams to the Presidency the Federalists were accused of being the friends of Great Britain and the Republicans the friends of France. The Republicans declared themselves the only true friends of the people, and stigmatized all others as aristocrats and monarchists.

321. *By what majority was Adams elected?*

By a majority of two electoral votes over Jefferson, the Republican candidate, who became Vice-President.

ADAMS' ADMINISTRATION — 1797–1801.

322. *When was Adams inaugurated President?*

March 4, 1797.

323. *During Adams' administration what were the most memorable occurrences?*

The passage of the Alien and Sedition Laws, and difficulties with France.

324. *What were the* Alien and Sedition Laws?

The Alien Law authorized the President to expel from the country any foreigner whom he deemed injurious to the United States. Under the Sedition Law, anyone libeling Congress, the President or the government could be fined or imprisoned.

325. *What difficulties sprang up between this country and France, and what prevented war between them?*

Our flag was insulted, our vessels were captured, and our envoys were refused audience by the French government. Hostilities were begun on the seas, but when Napoleon became First Consul of France the difficulty ceased. Peace was declared in 1800.

326. *Why was France so hostile to the United States when she had previously rendered such valuable services?*

Having rendered us assistance, many of her people believed that we should return her favors, and, becoming desperate in her home difficulties, she sought revenge. Our demand for the recall of Genet the French people considered an insult to them.

327. *In the midst of these excitements what memorable event occurred?*

The death of George Washington, December 14, 1799, at Mount Vernon, aged sixty-seven years.

328. *When was the seat of government removed from Philadelphia to Washington?*

In the year 1800.

329. *What was the political feeling during the Adams administration?*

Strong party feeling prevailed throughout the administration. The unpopularity of the Alien and Sedition Laws resulted in the success of the Republican candidates at the next Presidential election.

330. *Who were candidates in the campaign of 1800?*

Adams and Pinckney for the Federalists. Thomas Jefferson and Aaron Burr for the Republicans.

331. *What tie vote occurred in this election?*

One between Jefferson and Burr.

JEFFERSON'S ADMINISTRATION.

332. *How was Thomas Jefferson elected President?*

There being no election by the people, he was elected by Congress on the thirty-sixth ballot.

333. *What was the most important event of Jefferson's administration?*

The purchase of Louisiana from Napoleon for $15,000,000. This secured more than one million square miles of land, and full possession of the Mississippi. The tract sold to us had just been ceded by Spain to France.

334. *What was the cause of the war with Tripoli?*

American commerce suffered greatly from the pirates of

the Barbary States. They held the crews of captured vessels until ransomed. The war occurred in 1805.

335. *What daring exploit was accomplished by Lieut. Decatur?*

The frigate Philadelphia, running aground while in the harbor of Tripoli, had fallen into the hands of the Bashaw. Decatur entered the harbor with a small vessel, apparently in distress, and concealing his men below, boarded the Philadelphia by surprise, swept the crew into the sea, set the ship afire, and amid a tremendous cannonade from the batteries escaped without the loss of a man.

336. *What difficulties arose between England and the United States?*

England claimed the right of stopping American vessels on the high seas, searching for seamen of English birth and pressing them into the British navy. Accordingly the British frigate Leopold fired into the American frigate Chesapeake off the coast of Virginia, and her commander, going aboard, seized four of the crew, three of whom were Americans by birth. They were carried off on the pretense that they were deserters.

337. *What was the American doctrine in regard to naturalized foreigners? What the English doctrine?*

The Americans claimed that a foreigner, when naturalized, became an American and entitled to the same protection as any other citizen. The English doctrine was "Once an Englishman, always an Englishman."

338. *After the capture of the Chesapeake, what did Jefferson order?*

That all British war vessels should quit the waters of the United States.

339. *What was the "Embargo Act"?*

A Resolution of Congress forbidding American vessels

to leave port. As this was so injurious to our commerce the restriction was removed, but all intercourse between England and France was forbidden.

340. *What was the Milan Decree?*

A decree of Napoleon for the confiscation of all vessels which submitted to search by an English ship, or paid tribute.

341. *What deplorable meeting occurred between Aaron Burr and Alexander Hamilton?*

A duel in which Hamilton was killed. This occurred in July, 1804, and was greatly lamented by the American people.

342. *What was "Burr's Conspiracy"?*

In 1806 Aaron Burr was arrested for an alleged attempt to set up an independent government west of the Alleghanies. He was tried for treason, but acquitted. Undoubtedly his ambition was to be president of a separate republic, to conquer Mexico and establish a strong government.

343. *For what is Robert Fulton noted?*

For inventing the steamboat. The first trial trip was made from New York to Albany in 1807.

344. *At the close of Jefferson's second term, what was the political sentiment of each party?*

The bitterness existing between the United States and England was fast moving toward war. The Republicans, under the leadership of James Madison, advocated the enforcement of American rights, while the Federalists were opposed to a war policy.

345. *When was James Madison inaugurated President?*

March 4, 1809.

MADISON'S ADMINISTRATION — 1809–1817.

346. *What Indian disturbances occurred in the year 1811?*

British émissaries had aroused the Indians to war, and Tecumseh formed a confederacy of the Northwestern tribes. Gen. William H. Harrison was sent against them, and at the battle of Tippecanoe routed them with great slaughter.

347. *What acts did England continue to commit against the United States, and with what result?*

They continued to impress our seamen, capture our ships, and even went so far as to send war vessels into our waters and seize our ships as prizes. The British government refusing to cease this offensive course, all hope of peace was abandoned and our people prepared for war.

348. *When was war formally declared against Great Britain, and how long did it last?*

War was declared June 19, 1812, and lasted two years and a half.

WAR OF 1812.

349. *What was the opening event of the war of 1812?*

Our government proposed to invade Canada. Accordingly Gen. Hull crossed over from Detroit; but, learning that the British and Indians were gathering to attack him, he retreated, pursued by a force of British under Gen. Brock and of Indians under Tecumseh.

350. *Describe the surrender of Detroit.*

As Gen. Brock marched to attack the fort, Hull seemed to lose all presence of mind and to fear the risk of a battle. He raised the white flag, surrendered Detroit with its garrisons and stores, and the whole of Michigan, without even stipulating for the honors of war.

351. *What other attempt was made to invade Canada, and with what result?*

In October of the same year Gen. Van Rensselaer sent

a small body of men across the Niagara River to attack the British at Queenstown Heights. The enemy were driven from their position and Gen. Brock was killed. Gen. Van Rensselaer now returned to bring over the rest of his army, but the militia had lost their courage and refused to go. The troops on the Canadian shore, thus abandoned, were compelled to surrender.

352. *What were some of the most important naval victories for the Americans in 1812?*

The capture of the Guerriere by the Constitution, August 19; of the Frolic by the Wasp, October 18; of the Macedonian by the United States, October 25; and of the Java by the Constitution, December 29.

353. *During this year, how many prizes were captured by the Americans?*

More than three hundred.

354. *What effect did these remarkable naval victories have upon the people?*

They aroused great enthusiasm and inspired confidence. Enlistments became rapid, and the course of the government was generally approved. In the midst of these successes Madison was re-elected with but little opposition.

1813.

355. *What was the plan of the campaign of 1813?*

Three armies were raised with the intention of invading Canada. The division under Harrison was sent to the west shore of Lake Erie; the division under Dearborn between Erie and Ontario; and Hampden's division was stationed on the shore of Lake Champlain.

356. *What successes had these divisions?*

They accomplished but little.

357. *Describe Perry's victory on Lake Erie.*

The American fleet consisted of nine vessels carrying fifty-four guns, and the British fleet of six vessels with sixty-three guns. Perry's flag-ship, the Lawrence, engaged two of the heaviest vessels of the enemy, and fought until but eight of his men were left. Leaving the Lawrence he passed to the Niagara in a rowboat, and within fifteen minutes after mounting her deck won the victory.

358. *What daring exploit was performed by Perry?*

While he was hastening from the Lawrence to the Niagara the enemy's guns were directed upon him; but, although he passed within pistol-shot of the British, he escaped without injury.

359. *In writing to Gen. Harrison of the victory gained, what memorable words did Perry use?*

"We have met the enemy, and they are ours."

360. *What course did Harrison pursue after hearing of the Erie engagement?*

Harrison was at Sandusky Bay preparing to invade Canada, and at the news of this victory crossed the lake and landed at Malden, where on his approach the British retreated. They were overtaken on the banks of the Thames River and compelled to surrender. In this engagement Tecumseh was killed.

361. *What were the principal American naval victories in 1813?*

The capture of the Peacock by the Hornet, February 24; of the Boxer by the Enterprise, September 5; of Barkley's fleet by Perry's fleet, September 10.

362. *What were the important British naval victories in 1813?*

The capture of the Chesapeake by the Shannon, and of the Argus by the Pelican.

363. *In what engagement, and by whom, was used the sentence, "Don't give up the ship"?*

It was the last command of Capt. Lawrence as he was carried below decks during the engagement between the Chesapeake and Shannon.

364. *What Indian disturbances occurred, and who was sent to punish them?*

The Alabama Indians arose, fell upon Fort Mims and massacred the garrison. Gen. Jackson took command and drove them from place to place; and at Horseshoe Bend, where they had fortified themselves, the soldiers with fixed bayonets scaled their breastworks, and a desperate battle ensued. Six hundred Creeks were killed. Those who escaped were glad to make peace on any terms.

365. *What ravages were committed by Admiral Cockburn?*

Early in the spring Cockburn began devastating the southern coast. In Virginia and the Carolinas he burned bridges, farm-houses and villages, robbed the inhabitants, plundered churches, and murdered the sick in their beds.

1814.

366. *In the third invasion of Canada, what battles were fought?*

The Americans attacked the British at Chippewa, July 5, and gained a brilliant victory. A second engagement was at Lundy's Lane, July 25.

367. *Describe the battle of Lundy's Lane.*

It was one of the bloodiest battles of the war. Gen. Scott commanded the American force of one thousand men, and maintained the unequal contest until dark. A battery located on a height was the key to the British position. Scott asked Col. Miller if he could take it. "I'll try, sir," was the reply. The battery was taken.

Three times the British rallied for its recapture, but were unsuccessful. This victory, though glorious to the American arms, was barren of direct results.

368. *Give a description of the battle of Lake Champlain.*

In this contest the British fleet on Lake Champlain attacked the American squadron under Commodore McDonough, and was nearly annihilated. Prevost, with twelve thousand men, advanced against Plattsburg, but when he found that his ships were lost he fled, leaving his sick and wounded and large quantities of military stores.

369. *What were some of the ravages of the British on the Atlantic coast?*

Gen. Ross marched to Washington, captured the city, burned the Capitol and other public buildings, with libraries and records, and several private dwellings.

370. *How did the term "Hartford Convention Federalists" originate?*

A convention of Federalists from the New England States met at Hartford, December 15, 1814, and bitterly opposed the administration because of its mode of conducting the war. The meeting was branded with odium by the friends of the administration, and the name "Hartford Convention Federalist" was long used as a term of reproach.

371. *Where and when were the articles of peace signed?*

At Ghent, December 24, 1814.

1815.

372. *After this treaty, what terrible battle was fought, and with what loss?*

The battle of New Orleans, January 8. Gen. Jackson commanded the American forces, numbering 6,000, and Gen. Pakenham commanded the British, numbering 12,000.

The American loss was seven killed and seven wounded. The British loss was 2,500.

373. *What was the national debt at this time?*

$127,000,000.

374. *At the close of Madison's term of office, what was the political feeling?*

The Federalist party was practically broken up by its opposition to the war, and James Monroe, the Republican candidate for President, was almost unanimously elected. He was generally beloved, and all parties united in his support.

375. *When was James Monroe inaugurated?*

March 4, 1817.

MONROE'S ADMINISTRATION — 1817–1825.

376. *What was the Missouri compromise?*

A bill introduced by Henry Clay defining the limits of slavery; it provided that all States north of latitude 36° 30′ and all Territories west of the Mississippi should be free.

377. *What foreigner visited this country as "The Nation's Guest"?*

La Fayette, in 1824.

378. *What was the nature of the Monroe doctrine?*

It was a declaration by President Monroe that any attempt by a European nation to gain domination on American soil would be considered by the United States as an unfriendly act.

379. *How was Florida obtained?*

By a treaty with Spain, in 1819.

380. *What political parties were now before the people?*

The Whig party, which was formed in Jackson's time, was fast coming to the front as an opponent to the Repub-

lican party, which about this time changed its name to Democratic. The Whigs were in favor of a protective tariff and a general system of internal improvements. The Democrats opposed these measures. John Quincy Adams and Henry Clay were the champions of the Whigs, and Andrew Jackson and John C. Calhoun of the Democrats.

381. *What was the origin of the term "loco-foco"?*

It was a name applied to the Democratic party in 1835 in consequence of the outbreak of a quarrel in a Democratic meeting, where the lights were all put out, and but for the loco-foco or lucifer matches which some of the members carried in their pockets it would have been necessary to adjourn the proceedings.

382. *What is a protective tariff?*

A system of duties on imported goods for the purpose of encouraging home manufactures.

383. *How was John Quincy Adams elected President*

There were four candidates, and no clear majority of votes was obtained for any one of them. Adams was therefore chosen by the House of Representatives.

J. Q. ADAMS'S ADMINISTRATION — 1825–1829.

384. *What important events occurred during Adams's administration?*

The first railroad was completed and the Erie Canal was opened.

385. *Where was the first railroad built in the United States, and when?*

From Albany to Schenectady, New York, in 1833. A short line had been built in Maryland, in 1828.

386. *How long is the Erie Canal?*

About 363 miles.

387. *Why was the "American System" (a protective tariff) popular in the East and unpopular in the South?*

Protection for the East meant shutting out foreign manufactures from a direct competition with Eastern manufactured products; while in the South, agriculture being the chief pursuit, the people there desired manufactured goods brought to them as cheaply as possible.

388. *Why was Adams not elected to a second term of office?*

Because of the policy of protection advocated by his party.

389. *Who succeeded Adams?*

Andrew Jackson, who was inaugurated on March 4, 1829.

390. *When and by whom was the corner-stone of Bunker Hill Monument laid?*

By Gen. La Fayette, on the fiftieth anniversary of the battle, June 17, 1825.

JACKSON'S ADMINISTRATION — 1829–1837.

391. *What was the character of Jackson's administration?*

Inflexible honesty and sturdiness of purpose.

392. *What was his idea of "rotation in office"?*

Jackson at once set out to surround himself with his political friends, and turn his political opponents out of their places under government. During his first year as President there were nearly seven hundred removals from office, not including subordinate clerks, while in the forty years preceding there had been but seventy-four.

393. *What was the Nullification Ordinance, and who were the strongest supporters?*

It was an ordinance adopted by the State of South Carolina, declaring that the tariff laws were "null and

void," and that South Carolina would secede from the Union if force should be employed to collect any revenue. John C. Calhoun and Robert Y. Hayne were its most prominent supporters.

394. *What action did Jackson take?*

He issued a proclamation announcing his determination to execute the laws, and ordered troops under Gen. Scott to Charleston.

395. *What was Henry Clay's "Compromise Bill"?*

In order to prevent an open rupture between South Carolina and the government, Clay advocated a general reduction of the tariff. This compromise was accepted by both sides, and quiet was restored.

396. *Who said "I would rather be right than President," and why did he say it?*

It was an expression of Henry Clay when his friends insisted that to advocate the compromise would lessen his chances for the Presidency. This step demanded great moral courage, as it required a partial surrender of his cherished theories of protection and an open breach with many political friends.

397. *What important bill did Jackson veto during his first term? What did he do in 1833 in regard to the public funds of the United States?*

He vetoed the bill renewing the charter of the United States Bank. In 1833 he withdrew the public funds from this bank and deposited them in local banks. Owing to the withdrawal of this money the bank contracted its loans, money became scarce among the people and commercial distress followed. The measure excited violent clamor, but Jackson was sustained by the Democratic majority in the House of Representatives. When the

money was deposited in the local banks, it became easy to borrow, and speculation extended to every branch of trade.

398. *What can be said of speculation at this time?*

Land speculation was the great mania of the times. New cities were laid out in the wilderness, fabulous prices were charged for building-lots, and fortunes seemed to be within reach of everyone. These schemes, which existed only on paper, at last came to a disastrous collapse.

399. *What Indian troubles occurred during Jackson's administration?*

The Black Hawk war broke out in the Northwest Territory. After some skirmishing the Indians were driven off and their leader, Black Hawk, was captured. A war with the Florida Seminoles, also, grew out of an attempt to move them, in accordance with a treaty, to lands west of the Mississippi.

400. *What demands were made of the French government?*

They had promised to pay $5,000,000 for damages to our commerce during Napoleon's war. Jackson urged Congress to make reprisals on French ships. By the mediation of England, the account was settled and war prevented.

401. *What were the leading principles of the Democratic party in the election of Martin Van Buren? Who was the Whig candidate?*

No United States Bank; no protective tariff. Gen. Harrison was the Whig candidate.

VAN BUREN'S ADMINISTRATION — 1837–1841.

402. *What were some of the memorable events during Van Buren's administration?*

The financial crisis of 1837, and the Patriot war.

403. *What were some of the causes of the financial crisis?*

(1) The specie circular, which was issued by Jackson, directing that payments for public lands should be made in gold and silver.

(2) The order of Congress that the surplus public money, amounting to about $28,000,000, be withdrawn from the local banks and distributed among the States. The banks could not meet this demand.

(3) Heavy importations of European goods, which had to be paid for in gold and silver.

(4) A terrible fire in New York City on the night of December 16, 1835, which burned six hundred valuable stores, and property to the amount of $18,000,000.

404. *Mention some results of this crisis.*

Business men could not pay their debts and failures were an every-day occurrence. In New York City alone during March and April, the failures amounted to more than $100,000,000. Property of all kinds declined in value. Eight of the States became wholly or partly bankrupt, and even the United States government could not pay its indebtedness. Consternation seized all classes, confidence was destroyed and trade stood still.

405. *What was the Patriot war?*

The Canadian rebellion against England.

406. *What occurred during the Patriot war?*

This revolt stirred the sympathies of the American people. Meetings were held, volunteers offered and arms contributed. The President issued a proclamation, and Gen. Scott was sent to the frontier to preserve the peace. American filibusters took possession of Navy Island, in the Niagara River, but were dislodged by British troops. The steamer Caroline was taken by British troops and sent, with her crew, over the Falls.

407. *What disturbance occurred between Maine and New Brunswick?*

The people on both sides threatened to take up arms to support their respective claims as to the boundary lines. For some time there was great peril of a war with England, but the matter was settled during Tyler's administration by what is called the Ashburton treaty of 1842, Lord Ashburton and Daniel Webster acting as commissioners.

408. *At the close of Van Buren's administration, what was the prevalent political feeling?*

The financial difficulties had weakened the faith of the people in the Democratic party, and Van Buren failed of re-election.

409. *Which party was now successful?*

The Whig party elected William Henry Harrison by an immense majority.

HARRISON AND TYLER'S ADMINISTRATION — 1841–1845.

410. *How long did Harrison remain in office, and who succeeded him?*

One month. He was succeeded by the Vice-President, John Tyler.

411. *Did Tyler carry out the principles of the party which elected him?*

He did not.

412. *What bill was vetoed by Tyler, to the great disgust of the Whigs?*

A bill for establishing a United States Bank.

413. *What was the cause of the Dorr Rebellion?*

The people of Rhode Island organized by force under a new constitution and elected a man named Dorr, Governor. Dorr was arrested, tried for treason, and imprisoned, but afterwards pardoned.

414. *What were the Anti-Rent difficulties?*

The tenants on some of the old patroon estates in New York refused to pay their rent. Assuming the disguise of Indians, they tarred and feathered those who paid rent, and even killed the officers who served warrants upon them.

415. *What occurred in relation to the Mormons?*

They were settled at Nauvoo, Ill., but, having incurred the enmity of the people about them, were compelled to leave. Joseph Smith, their leader, was killed by a mob.

416. *When was Texas admitted into the Union? Why was their petition at first rejected?*

December 27, 1845. She had applied for admission in 1836. The objections to her admission were two: 1st, her boundary line was in dispute, and if she were annexed we could hardly hope to escape a war with Mexico; 2d, Texas held slaves, and if admitted would add another to the list of slave states.

417. *Where was the first telegraph line, and what was the first message sent by it?*

From Baltimore to Washington. The message is said to have been an announcement of the nomination of James K. Polk for President.

418. *When and by whom was the cotton-gin invented?*

In 1792, by Eli Whitney; but its full value was not recognized until the raising of cotton had become an important feature in the agriculture of the Southern States.

419. *What was the great political question on which hinged the campaign for President? Who were the nominees?*

The question of annexing Texas. The Whigs, who opposed annexation, nominated Clay, and the Democrats, who favored it, nominated Polk. After a fierce contest Polk was elected.

JAMES K. POLK'S ADMINISTRATION — 1845–1849.

420. *What were the causes which led to the war with Mexico?*

The annexation of Texas by the United States, and Mexico's claim to a certain tract of land.

421. *Who had command of the American army?*

General Zachary Taylor in 1846, and General Winfield Scott in 1847. Scott was successful in many engagements, entering Mexico September 14, 1847.

422. *What prominent battles were won by Taylor, and what by Scott?*

Taylor won the battles of Palo Alto on May 8, Monterey on September 24, and Buena Vista on February 23, 1847. General Scott won the battles of Vera Cruz on March 29, and Cerro Gordo on April 18, and captured the entire Mexican force in the City of Mexico.

423. *Who was John C. Fremont, and what part did he take in the Mexican war?*

He was sent out by the United States government with a small exploring party to seek a new route to Oregon. While in California in 1844, he received instructions from the government to protect the interests of the United States in that territory. Troops were quickly raised and the Mexicans were compelled to retire southward. By the advice of Fremont the American settlers in California declared their independence of Mexico, July 5, 1846.

424. *What were the terms of peace between the United States and Mexico?*

A withdrawal of United States troops; that Mexico should cede to the United States the territories of New Mexico and Upper California for the sum of $15,000,000, and pay $3,500,000 due to American claimants.

425. *What was the Wilmot Proviso?*

David Wilmot offered in Congress, August, 1846, a bill forbidding slavery in any territory which should be acquired through the Mexican war. This was designed to prohibit slavery in the territory of Texas. It excited violent debate, but did not become a law.

426. *When was gold discovered in California?*

In February, 1848, by Sutter while digging in a mill-race in the Sacramento Valley.

427. *What political parties were now in the field, and who were nominated by them?*

There were three parties. The Whigs nominated General Taylor; the Democrats, Lewis Cass, while the Free-soilers, who were opposed to the extension of slavery, and believed that, as Taylor was a slave-holder, the principle of slavery would be fostered by him, formed a new party and nominated Martin Van Buren. Taylor was elected.

TAYLOR AND FILLMORE'S ADMINISTRATION — 1849–1853.

428. *How long was Taylor in office?*

He was inaugurated President March 4, 1849, and died July 9, 1850, after an illness of only five days.

429. *What important question arose at the beginning of Taylor's administration?*

California applied for admission to the Union as a free State. This brought the question of slavery into intense agitation, and for a time it seemed as though a terrible crisis was at hand.

430. *What was the Omnibus Bill?*

The compromise of 1850, presented by Henry Clay, and proposing (1) that California should come in as a free State; (2) that the territories of Utah and New Mexico should be formed without any provision concerning slavery;

(3) that Texas should be paid $10,000,000 to give up its claim on the territory of New Mexico; (4) that the slave trade should be prohibited in the District of Columbia; and (5) that a Fugitive Slave Law should be enacted.

431. *Who was the Great Pacificator?*

Henry Clay, because he was ever ready to surrender part of his political policy in order to establish peace.

432. *What was the Fugitive Slave Law?*

It provided for the return of runaway slaves to their owners, even if they had escaped to a free State.

433. *What is to be said of the invasion of Cuba?*

About five hundred adventurers undertook the annexation of Cuba to the United States, but were defeated, and Lopez, the leader, was garrotted at Havana in 1851.

434. *What two great men died in 1852?*

Henry Clay and Daniel Webster.

435. *Who were the candidates in the next Presidential election, and what policies did the parties advocate?*

The Democrats and Whigs declared that they stood by the provisions of the Omnibus Bill, but the Free-soilers were outspoken against it. Franklin Pierce, the Democratic nominee, was elected by a large majority. Gen. Scott was the Whig candidate.

PIERCE'S ADMINISTRATION — 1853–1857.

436. *What was the Kansas-Nebraska Bill? Who presented it?*

Its effect was to repeal the Missouri Compromise by allowing the people of each Territory to decide whether it should be bond or free. It was proposed by Stephen A. Douglas, and had direct relation to the Territories of Kansas and Nebraska. It became a law in May, 1854.

437. *How did this bill affect the inhabitants of Kansas?*

A bitter contest arose between the pro-slavery and anti-slavery men. Each party sent bodies of armed emigrants to the Territory. Disturbances arose, mobs were formed, houses were attacked and pillaged, citizens were murdered in cold blood, and for several years Kansas was the scene of lawless violence.

438. *What was the Gadsden Purchase?*

A dispute arose between the United States and Mexico in regard to the boundary line, and Gen. Gadsden negotiated a settlement, whereby $10,000,000 was paid to Mexico for additional territory along the Gila River.

439. *What treaty was made with Japan?*

Commodore Matthew Perry's expedition to Japan in 1854 resulted in a treaty by which that country opened two ports to the merchants of the United States.

440. *What was then the political situation? Who were nominated?*

The compromises of 1820 and 1850 being now abolished, the slave question became the turning-point of the election. New party lines were drawn to meet this issue. The Whig party now ceased to exist, and the Republican party, absorbing all who opposed the extension of slavery, nominated John C. Fremont, who carried eleven States. The Democratic party nominated James Buchanan, who was elected. The Know-Nothing, or American party, organized to resist the influence of foreigners, carried Maryland, but its existence was of short duration. Its motto was "America for Americans."

BUCHANAN'S ADMINISTRATION — 1857–1861.

441. *What was the Dred Scott Decision?*

The Supreme Court of the United States declared that slave-owners might take their slaves into any State in the

Union without forfeiting authority over them. Dred Scott was a slave, and claimed freedom on the ground that he had been taken into free territory.

442. *What did John Brown attempt to do?*

Being an ardent lover of negro freedom, Brown conceived the wild scheme of taking the law into his own hands and liberating the slaves. He seized the United States arsenal at Harper's Ferry, Virginia, in 1859, and proclaimed freedom to all the slaves in the neighborhood. He was taken captive and hanged.

443. *In the elections of 1860, who were candidates for the Presidency?*

Abraham Lincoln, Stephen A. Douglas, John C. Breckinridge and John Bell.

444. *What did each of the parties advocate?*

The Lincoln party held, that while slavery must be protected where it was, it ought not to be carried into any free territory.

The Douglas party favored squatter sovereignty, that is, the right of each State to decide whether it should exclude or permit slavery.

The Breckinridge party claimed that any citizen had a right to migrate to any territory, taking with him anything that was property, including slaves, and that Congress was bound to protect the rights of slave-holders everywhere.

The Bell party had for its motto: "The Constitution of the country, the Union of the States and the enforcement of the laws."

445. *What were the causes which led to the civil war?*

The agitation of the slavery question was the chief cause. The Southern States, believing they had a right to secede from the Union, seceded, but the Federal government denying that right, raised armies and enforced its authority.

446. *Which State first passed an ordinance of secession?*

South Carolina, December 20, 1860.

447. *What other States followed this example?*

Mississippi, Florida, Alabama, Georgia, Louisiana, Texas, Virginia, North Carolina, Arkansas and Tennessee

448. *What government was formed by these States, and when and where was it organized?*

The Confederate States of America, and the form of government was similar to the government of the United States. On February 4, 1861, a convention of the seceded States met at Montgomery, Alabama, and there organized the Confederacy.

449. *Who was elected its President, and when was he inaugurated?*

Jefferson Davis, who was inaugurated February 4, 1861.

LINCOLN'S ADMINISTRATION — 1861.

450. *What event signalized the commencement of the war?*

The bombardment of Fort Sumter, in the harbor of Charleston, S.C.

451. *What was the result of this bombardment?*

Fort Sumter fell into the hands of the Confederates under Beauregard, April 14, 1861. Maj. Anderson, the commander of Sumter, was permitted to go north with his men. The effect of this event was electrical. It unified the North and also the South. Party lines vanished. The Union men at the South were borne into secession, while the Republicans and Democrats at the North combined to support the government. The war spirit swept over the country like wild-fire.

452. *What did Lincoln do in regard to troops?*

He issued a requisition for 75,000 troops, and soon afterward a call for 300,000 volunteers.

453. *Where was the first blood shed in this war?*

In Baltimore, April 19, 1861, a mob of Confederate sympathizers attacked the Sixth Massachusetts regiment on its way to Washington.

454. *What valuable stores were seized by the Confederates?*

They seized the United States armory at Harper's Ferry and the navy yard at Norfolk. At the latter place there were twelve ships of war, two thousand cannon, two hundred and fifty thousand pounds of gunpowder, and great quantities of shot and shell.

455. *How did Colonel Elmer E. Ellsworth meet his death?*

After the seizure of Alexandria, Va., Ellsworth, seeing the Confederate flag still flying from the roof of a hotel, went up and tore it down. As he descended he was shot at the foot of the stairs by the landlord, named Jackson, who in turn fell at the hands of Private Brownell.

456. *When was the battle of Bull Run fought, and with what result?*

July 21, 1861, in Northern Virginia. Gen. McDowell, in command of the Federals, made the attack, and was defeated after a severe engagement.

457. *What effect had this defeat on the Northern people?*

At first they were much disappointed and discouraged; then came a renewed determination. Congress voted $500,000,000 and five hundred thousand men, and Gen McClellan was appointed to the command of the Army of the Potomac.

458. *Give an account of the battle of Ball's Bluff.*

A party of 2,000 Federals crossed the Potomac at Ball's Bluff. They were attacked and forced down the slippery, clayey bluff, from fifty to one hundred and fifty feet high, to the river below, where, in trying to escape, many were

drowned, some were shot, and scarcely half their number reached the other bank.

459. *What commanding officer was killed in this battle?*

Col. Baker, United States Senator from Oregon.

460. *What was the condition of Missouri?*

The State refused to pass an ordinance of secession, yet an effort was made to preserve an armed neutrality. Lyon foiled this attempt. Gen. Sigel was defeated in an engagement at Carthage. Gen. Lyon now took command, and was compelled either to fight superior forces or abandon that part of the State. He chose to fight.

461. *Where and when was General Lyon killed?*

At Wilson's Creek, August 10, 1861, while gallantly leading a bayonet charge.

462. *What proclamation was issued by Davis, and what was Lincoln's response?*

Davis issued a proclamation offering to commission privateers. Lincoln declared a blockade of the Southern ports.

463. *At the beginning of the year 1861, how many vessels were in the United States Navy? How many were there at the close of the year?*

One on the Northern coast, and 42 in the whole United States Navy. At the close of the year there were 264.

464. *What did England and France do by way of encouraging the Confederacy?*

They acknowledged the Confederates as belligerents, thus placing them on the same footing with the supporters of the government.

465. *Who were James M. Mason and John Slidell?*

Southern commissioners sent to England and France to plead the cause of the Confederacy.

466. *What was the Trent Affair?*

The commissioners were taken forcibly from the British steamer Trent by Capt. Wilkes of the United States Navy and brought back to the United States. This produced much excitement in England. The United States government, however, promptly disavowed the act and released the commissioners.

467. *When did Lieutenant-General Scott retire from active service, and who succeeded him?*

On the 1st of November, 1861, on account of age and physical infirmities. He was succeeded by Major-General George B. McClellan.

468. *Give a general review of the first year of the war.*

The large ships and stores at Harper's Ferry and Norfolk were captured by the Confederates. They were successful in the two great battles of the year, Bull Run and Wilson's Creek; also in the minor engagements at Big Bethel, Carthage, Lexington, Belmont and Ball's Bluff. The Union forces had saved Fort Pickens and Fortress Monroe, and captured the forts at Hatteras Inlet and Port Royal. They had also gained victories at Philippi, Rich Mountain, Boonsville, Carrick's Ford, Cheat Mountain and Dranesville. West Virginia, Maryland and Missouri were saved to the Union. Kentucky refused to secede.

1862.

469. *What was the plan for the campaign of 1862?*

On the part of the North there were three main objects. the opening of the Mississippi, the blockade of the Southern ports and the capture of Richmond.

470. *What was the size of each army? What successes had the Union forces early in this year?*

The Union forces numbered about 500,000; the Confederate about 350,000. Gen. Thomas won an engagement

at Mills Springs, and Commodore Foote and Gen. Grant captured Forts Henry and Donelson in Northern Tennessee.

471. *When and to whom did Forts Henry and Donelson surrender?*

Fort Henry was evacuated February 6, after a bombardment of one hour by Commodore Foote. Gen. Grant with his army intended to cut off the retreat, but the garrison escaped to Fort Donelson. The fleet now went back to the Ohio River and ascended the Cumberland, while Grant crossed to co-operate in an attack on Fort Donelson, which was captured, with fifteen thousand men, after three days' hard fighting.

472. *What was now the plan of operations?*

The Confederates fell back to Corinth, the great railroad centre of Mississippi and Tennessee, where their forces were gradually collected under the command of Gens. Johnston and Beauregard, while Gen. Buell at once occupied Nashville. The Union army ascended the Tennessee to Pittsburg Landing. Grant was placed in command and Buell ordered to reinforce him. The Confederates determined to rout Grant's army before the arrival of Buell.

473. *When was the battle of Shiloh fought, and who commanded?*

On the 6th and 7th of April. Gen. Grant commanded the Federal army and Gen. Beauregard the Confederate forces.

474. *Describe the battle of Shiloh.*

On Sunday morning, April 6, Johnston surprised the Union forces by a desperate assault. The Federals, having no time to form into order of battle, fought where they happened to stand, slowly yielding, and for twelve hours they obstinately disputed every inch of the way.

At last, pushed to the very brink of the Cumberland River, Grant massed his artillery and gathered around it the fragments for the final stand. By the aid of the gunboats below and Buell's reinforcements the tide of battle was stayed, and the Confederates fell back. They possessed, however, the Union camps, three thousand prisoners, thirty flags and immense stores; but they had lost their commander, Gen. Johnston. The next morning the Confederates were driven from the field.

475. *Where is Island No. 10, and when and by whom was it captured?*

In the Mississippi River, between Kentucky and Missouri. It was taken by Commodore Foote and Gen. Pope, April 7.

476. *When was the battle of Perryville fought, and who were the commanders?*

October 8, 1862. Gen. Bragg commanded the Confederates, Gen. Buell the Union troops.

477. *When was the battle of Murfreesboro fought, and which army was victorious?*

On December 31, 1862, Gen. Bragg, with 60,000 troops, attacked the Union forces under Gen. Rosecrans, and was repulsed. On January 2 the battle was renewed, but Bragg, being unsuccessful, retreated. This was one of the bloodiest contests of the war. The loss was one-fourth of the number engaged.

478. *What effect had this battle?*

The Confederates gave up the attempt to recover Kentucky.

479. *What was the plan of the first expedition against Vicksburg, and how did it terminate?*

Grant was to move along the Mississippi Central railroad, while Sherman was to descend the river from Mem-

phis with the gunboats under Porter. The plan was spoiled by Van Dorn's cavalry dash, which destroyed Grant's depot of supplies at Holly Springs. Sherman, ignorant of what had happened, pushed on and made an attack on Chickasaw Bayou, north of Vicksburg. After suffering a bloody repulse and hearing of Grant's misfortune, he fell back.

480. *What fighting occurred in Missouri?*

The Union General Curtis having command, attacked the Confederate General Price and drove him out of Missouri into Arkansas. Van Dorn now taking command, a desperate battle was fought at Pea Ridge, March 7 and 8, 1862, in which Van Dorn was totally defeated.

WAR ON THE SEA AND ON THE COAST.

481. *Describe the capture of New Orleans.*

The attempt was made with a fleet of forty-four vessels under Commodore Farragut, and 8,000 troops under Gen. Butler. Mortar-boats for six days stormed the outer defenses, but with little effect. Farragut then boldly resolved to carry the fleet past the defenses to New Orleans. At three o'clock in the morning, April 24, they advanced, running a fearful gauntlet of shot and shell and flames from the fire-rafts. They now encountered the Confederate fleet of thirty armed steamers, twelve of which were destroyed. New Orleans soon surrendered.

482. *After the capture of New Orleans, what course did Commodore Farragut pursue?*

He ascended the river, took possession of Baton Rouge and Natchez, and, running the batteries of Vicksburg, joined the Union fleet above.

483. *What was gained by the capture of Roanoke Island?*

It gave control to the outer defenses of Norfolk. It opened two sounds, eight rivers, four canals and two rail-

roads. It was an excellent rendezvous for ships, and exposed a large country to attack.

484. *What vessels were sunk by the Merrimac?*

The Cumberland and the Congress on March 8.

485. *Describe the encounter between the Merrimac and the Monitor.*

The morning after the ravages of the Merrimac the Monitor made her appearance and began the attack. The Merrimac, confident of success, poured in a broadside, but her balls glanced harmlessly off the Monitor's turret, or broke and fell to pieces on the deck. The battle now became a desperate conflict, the vessels fighting side by side, iron rasping on iron. Five times the Merrimac strove to crush her antagonist by running her huge iron beak against the Monitor's side. At each dash her prow would rise above the water, and at the same instant heavy volleys from the Monitor would crash against the exposed parts. In this manner the Merrimac received injuries so severe that she gave up the contest and steamed back to Norforlk thoroughly disabled.

486. *What would undoubtedly have been the final result if the Merrimac had been successful?*

She could have entered any port of the United States, destroyed cities, opened the blockade, and undoubtedly have secured recognition of the independence of the Confederacy by European nations. On this battle hinged the fate of the war.

487. *What became of the Merrimac and the Monitor?*

Just before the capture of Norfolk she was sunk by the Confederacy. The Monitor sunk, in a storm off Cape Hatteras.

488. *Who was John Morgan?*

Morgan was the noted leader of a band of guerrillas and

raiders in Tennessee. He repeatedly rode through Kentucky spreading terror in his path, burning towns, levying tribute, destroying telegraphs and railroads, and carrying off prisoners. In one raid alone in Ohio he boasted of having taken seventeen towns and cities, with a very large amount of army stores.

489. *Who was Quantrell?*

Quantrell was another famous guerrilla, although his raids were not so extensive as those of Morgan.

WAR IN THE EAST.

490. *In the war in the East, what was the objective point?*

Richmond.

491. *Who commanded in the Peninsular Campaign?*

Gen. McClellan.

492. *Describe the siege of Yorktown.*

Gen. Magruder, with only about 5,000 men, held such strong defenses along a line of thirteen miles that Gen. McClellan was brought to a stop. Heavy guns were ordered from Washington, but as the siege began Magruder quietly withdrew, having delayed the Union army a month.

493. *When was the battle of Williamsburg fought?*

On May 5 Gen. Hooker, with his division, maintained the contest for nine hours; then, being reinforced, he carried the works, and the pursuit was continued to within seven miles of Richmond.

494. *What were McClellan's plans, and how were they foiled?*

McDowell, with 30,000 men, was to meet him near Hanover Court House, and begin the siege of Richmond; but Gen. Johnston, suspecting this movement, ordered Gen. Jackson to move up the Shenandoah Valley and threaten Washington.

495. *What were the movements of Stonewall Jackson?*

After being reinforced by Gen. Ewell's division of 10,000 men, Jackson hurried down the valley and drove Banks across the Potomac. The excitement in Washington was intense. The President took military possession of all the railroads, called upon the Governors of loyal States to send militia to the defense of the capital, and ordered Fremont at Franklin, Banks at Harper's Ferry, and McDowell at Fredericksburg to capture Jackson. Then Jackson retreated, burning bridges as he passed, and escaped.

496. *What was the effect of these movements?*

With 15,000 men, Jackson had occupied the attention of three major-generals and 60,000 men, prevented McDowell's junction with McClellan and saved Richmond.

497. *While these events were in progress in the Shenandoah Valley, what were the movements of McClellan?*

McClellan had pushed his left wing across the Chickahominy. Before he could unite his army, a terrible storm flooded the swamps, and Chickahominy Creek became a broad river. Johnston, seeing the exposed wing, began an attack. He was severely wounded in this fight. The next day the Confederates were repulsed in great disorder.

498. *After the battle of Fair Oaks, what course did McClellan pursue?*

Jackson making his appearance near Hanover Court House, McClellan resolved to change his base of supplies to the James River. A series of battles followed, lasting seven days. The most important were those of Mechanicsville, Gaines's Mill, Savage's Station, Frazier's Farm and Malvern Hill. In this retreat the army fought by day to give time for the passage of baggage trains, and fell back at night to new positions. At Malvern Hill Lee received so bloody a check that he pressed no farther.

499. *What is the distance from Fair Oaks to the James River?*

Seventeen miles.

500. *What was the effect of this campaign?*

The North was as much discouraged as the South was elated. Lincoln called for 300,000 troops.

501. *What orders did McClellan now receive?*

To transfer his army to Aequia Creek, and put it under the command of Gen. Pope.

502. *Describe Lee's campaign against Pope.*

After some manœuvering, Pope was compelled to fight the entire Confederate army on the old battle-field of Bull Run. The shattered remains of the Army of the Potomac retreated and took refuge within the fortifications at Washington.

503. *What was the effect of this campaign?*

The Union army lost 30,000 men and a vast quantity of supplies. The capital was in great danger, with a victorious enemy outside and only broken battalions within.

504. *What did Lee do?*

He crossed the Potomac and entered Maryland.

505. *Who assumed command of the Army of the Potomac after Pope's defeat?*

Gen. McClellan.

506. *What notable battle was fought soon after?*

The battle of Antietam, September 17.

507. *After these battles, what course did Lee pursue?*

He retreated across the Potomac.

508. *What was the effect of Lee's defeat?*

The North was saved from invasion and Washington from attack.

509. *Why was McClellan again superseded, and by whom?*

For the slowness of his movements in pursuing the retreating army. Gen. Burnside took command.

510. *When was the battle of Fredericksburg fought, and with what result?*

On December 13. The Union army was defeated with a loss of 12,000 men.

511. *What were the Confederate victories during this year?*

Jackson's in the Shenandoah Valley; Lee's in the Peninsular campaign; the successful campaign against Pope; Bragg's raid in Kentucky; the battles of Cedar Mountain, Chickasaw Bluff and Fredericksburg.

512. *What were the Union victories?*

The capture of Forts Henry, Donelson, Pulaski, Macon, Jackson, St. Phillip, Island No. 10, New Orleans, Roanoke Island, Newbern, Yorktown, Norfolk, Memphis, and the opening of the Misssippi to Vicksburg. Also the battles of Pea Ridge, Williamsburg, Fair Oaks, South Mountain, Antietam, Iuka, Corinth and Murfreesboro and the silencing of the Merrimac.

513. *What terrible Indian massacre occurred?*

An outbreak in Minnesota, Iowa and Dakota. More than seven hundred whites were slain, and many thousands driven from their homes. Col. Sibley routed the Indians and took five hundred prisoners. Thirty-nine were hanged on one scaffold at Mankato, Minn., December 26.

1863.

514. *What was the war plan of 1863, and how large was the force engaged?*

The plan was about the same as that of the preceding year. The Union force was some 700,000, and the Confederate 350,000.

515. *When was the Emancipation Proclamation issued?*

January 1, 1863.

516. *Describe the second expedition against Vicksburg.*

After several weeks of fruitless effort on the north side of Vicksburg, Grant marched down the west bank of the river and crossed below the city. Between May 1 and 18 he defeated the Confederates at Fort Gibson, Jackson, Champion Hills, and Big Black River, and within seventeen days after he had landed Pemberton's army was shut up within the intrenchments of Vicksburg. After three desperate assaults the Union troops threw up intrenchments and began undermining the city. The siege lasted forty-seven days.

517. *When did Vicksburg surrender?*

On the 4th of July.

518. *What effect had this campaign?*

The Confederates lost the cities of Vicksburg and Jackson, with 37,000 prisoners and immense stores, and 10,000 of their troops killed and wounded. On the fall of Vicksburg, Port Hudson surrendered to Banks. The Mississippi was thus opened to the Gulf.

519. *After the battle of Murfreesboro, what were the movements in Tennessee?*

Little occurred until June, when Rosecrans, with 60,000 men, marched against Bragg and compelled him to evacuate Chattanooga. On September 8, 19 and 20 the battle of Chickamauga was fought. The Union army was defeated and withdrew to Chattanooga, while Bragg occupied the heights commanding the city, and threatened it with starvation.

520. *What was now the feeling in the North in regard to the Army of the Cumberland?*

One of great anxiety. The defeat of the Army of the

Cumberland made it seem but a matter of time when the Confederacy would be finally victorious.

521. *By what means was the Army of the Tennessee relieved?*

Grant was appointed to succeed Rosecrans, and relief was obtained by Hooker's arrival with two corps from the Army of the Potomac, while Sherman hastened by forced marches from Iuka 200 miles away.

522. *Where was Hooker, and how did he so suddenly appear before the Confederate army at Chattanooga?*

He was in Virginia. His army, 23,000 strong, came by rail in seven days, a distance of 1,200 miles.

523. *Describe the battles of Lookout Mountain and Missionary Ridge.*

The first movement was made by Gen. Thomas, who captured Orchard Knob on November 23. The following day Hooker charged the fortifications of Lookout Mountain. The Union forces carried the heights and swept over the crest, driving the enemy before them. The next morning Hooker advanced on the south of Missionary Ridge. Sherman was engaged on the northern flank. Grant, from his position on Orchard Knob, saw the effect of Sherman's assaults. The Confederate line in front of him was weakening, and with a bold movement Thomas's corps was launched against its centre. The orders were to take the rifle-pits at the foot of Missionary Ridge, then halt and reform; but in the excitement of success officers and men pushed forward and up the ascent. Grant caught the inspiration, and the entire force was ordered to engage in the conflict in one grand charge. Up they went, over rocks and chasms, all lines broken in the eagerness to reach the summit. Without firing a shot, and heedless of the tempest of missiles descending upon them, they gained the crest, captured the guns and turned them upon the retreating foe. That

night the glow of the Federal camp-fires along the heights about Chattanooga crowned the most brilliant of Grant's achievements and the most picturesque of the battles of the war. This fight has become famous as the "battle above the clouds."

524. *What effect had these successes?*

The Union forces possessed Chattanooga, Bragg's army was routed and the General resigned. The victories gave control of East Tennessee, and furnished an open doorway by which the Union army gained easy access to Virginia, North Carolina, South Carolina, Georgia and Alabama.

525. *After the battle of Fredericksburg, who took command of the Army of the Potomac?*

Gen. Joseph Hooker, on January 26.

526. *When was the battle of Chancellorsville fought?*

On May 2 and 3. The Union army was defeated with great loss.

527. *In this battle, what noted Confederate officer was killed?*

"Stonewall" Jackson. While returning from a reconnoissance at the front, he was fired upon by his own men, who mistook his escort for Federal cavalry.

528. *Who succeeded Hooker after the battle of Chancellorsville?*

Gen. George Meade.

529. *What were the movements of Lee?*

With the flower of the Confederate army he crossed the Potomac, passed through Maryland, entered Pennsylvania, and proceeded within four miles of Harrisburg.

530. *How was his progress arrested?*

By the battle of Gettysburg, which was fought the 1st,

2d and 3d of July, Gen. Meade commanding the Union forces. Gen. Lee retreated to Virginia.

531. *At the battle of Gettysburg, what were the casualties?*

The Union loss was 23,000; the Confederate, 36,000.

532. *The loss of Vicksburg and the battle of Gettysburg had what effect on the Confederacy?*

These losses and defeats turned the point of war, and the fortunes of the Confederacy began to wane.

533. *How did Admiral Dupont attempt to take Charleston?*

Having confidence in the ability of the iron-clads to resist cannon-balls, he attempted to run the fortifications and force his way up to the city. The attempt was a disastrous failure.

534. *What were the Confederate successes for the year 1863?*

The Confederates gained the great battles of Chickamauga and Chancellorsville. The Union cause in Texas was depressed. Galveston was seized and every attack on Charleston successfully resisted.

535. *What were the Union successes?*

The Federals took Vicksburg and Port Hudson, and won the battles of Chattanooga and Gettysburg. Arkansas, East Tennessee, large parts of Louisiana and Mississippi and some parts of Texas were held by Union troops.

536. *When was the Draft Riot?*

Congress in 1863 passed a Conscription Act, and under this act the President ordered a draft for 300,000 men. This led to a three days' riot in New York City, beginning on July 13, and during which 150 lives were lost and a very large amount of property was destroyed.

1864.

537. *Describe the raid made by General Judson Kilpatrick at the beginning of 1864.*

On the 28th of February Kilpatrick made a bold and successful raid upon the exterior defenses of Richmond. Railroad tracks were torn up, telegraph wires cut, six large grist mills were destroyed and heavy damage was done. At a point three miles from Richmond he found the enemy's works too strong to be assailed by a force of cavalry and withdrew, camping that night within six miles of the Confederate capital.

538. *What was accomplished by this expedition?*

Many miles of railroad were cut, several hundred prisoners were captured, and $7,000,000 worth of property was destroyed.

539. *What befell Colonel Dahlgren and his command?*

While attempting to return, after destroying the grist mills on the James River Canal, Dahlgren fell into an ambush of the enemy and was killed. His remains were treated with indignity.

540. *When was General Grant appointed Lieutenant-General of the Union Army?*

March 3, 1864.

541. *Where was the main strength of the Confederacy?*

It lay in the armies of Robert E. Lee in Virginia and Joseph E. Johnston in Georgia.

542. *What plan was now adopted?*

Grant was to march against Lee, and Sherman to attack Johnston and sweep through to the coast.

543. *Describe Sherman's advance upon Atlanta.*

He started with a force of 100,000 men. For one hundred miles there was continuous skirmishing. Sherman

would drive Johnston into a stronghold, and then with consummate skill would outflank him, when Johnston with equal skill would retreat to a new post and prepare to meet his opponent again. Several bloody battles were fought, and finally Johnston retired on July 10 to the intrenchments of Atlanta. Hood was now put in command.

544. *When did Atlanta surrender?*

September 2, 1864.

545. *What had been the loss during this campaign of four months' fighting?*

There had been ten pitched battles and scores of minor engagements, at a cost to the Union army of 30,000 and to the Confederacy of about 40,000 men.

546. *What movement was made by Hood, and why?*

He turned to invade Tennessee, with the expectation that Sherman would follow him, and that thus Georgia would be saved from invasion.

547. *What became of Hood's army?*

Hood marched against Gens. Thomas and Schofield at Nashville. After severe fighting, Thomas withdrew from the fortifications and remained two weeks. He then suddenly burst forth and drove the Confederate army out of its intrenchments and into headlong flight. It was completely demoralized, and, for further use, destroyed.

548. *Describe Sherman's "March to the Sea," after the burning of Atlanta.*

Hood being moved from his path, there was little to impede his progress. With 60,000 troops, in five weeks he marched three hundred miles, and then captured Savannah.

549. *What effect had this march on Georgia?*

A fertile region, sixty miles wide and three hundred

miles long, was devastated, and three hundred miles of railroad were destroyed.

550. *At the time of Grant's move towards Richmond, what battles were fought?*

The battles of the Wilderness and Spottsylvania.

551. *Describe the battle of the Wilderness.*

After crossing the Rapidan, the Union army plunged into the Wilderness, where it was attacked on May 5, by the Confederate army. In the woods, dense with smoke, this strangest of battles was fought. The third day both armies, worn out by the desperate struggle, remained in their intrenchments. Grant lost 20,000 men, Lee 10,000.

552. *What did Grant do, and what battle followed?*

He pushed his army by the Confederate right flank towards Spottsylvania Court House, where for five days, from May 8 to 12, terrible fighting occurred. Ten thousand men fell on each side.

553. *Where was the next engagement?*

Grant now concluded to try the flank movement again, and pushed forward to Cold Harbor, a short distance from Richmond. Lee hastened by a shorter route, and arrived in time to prepare for defense. Early on the morning of June 4 the Union army made an assault on Cold Harbor. Twenty minutes after the first shot was fired, fully ten thousand Union men were killed or wounded, while the enemy's loss was little over one thousand.

554. *What was the result of the attack on Petersburg?*

The Confederate works could not be carried, so Grant threw up intrenchments, and prepared for a siege of Richmond.

555. *What was the loss in this campaign?*

The Union army lost 70,000, and the Confederates 40,000.

556. *What memorable words were written by General Grant to the President on the 11th of May, 1864?*

"I propose to fight it out on this line, if it takes all summer."

557. *During the siege of Richmond, what two important events occurred?*

The Mine Explosion at Petersburg, Va., and the capture of the Weldon Railroad.

558. *What was the result of the mine explosion?*

A mine was dug beneath a strong Confederate fort, and was fired with a blast of 8,000 pounds of powder. The fort and garrison were destroyed. At the same time the Union artillery opened along the line, and an assaulting column rushed forward; but it stopped in the crater produced by the explosion. The Confederates, rallying, turned their artillery upon the mass of men within the demolished fort, and about 4,000 were lost before the rest could retreat to the Union lines. This is known as the "Battle of the Crater."

559. *What raids were made by General Early?*

Early entered Maryland, threatened Washington and Baltimore, defeated Wallace, and then withdrew to Virginia. In the same month — July — he crossed into Pennsylvania, his troops setting fire to Chambersburg; but after that he immediately withdrew.

560. *What was secured by these expeditions?*

A vast amount of stores, five thousand horses, and a withdrawal of part of Grant's army from before Petersburg.

561. *What did General Sheridan do?*

In September, Sheridan defeated Early at Winchester and Fisher's Hill, and in a week destroyed half the enemy and put the rest to flight. Early returned with reinforcements, and, under cover of a dense fog, surprised Sheri-

dan's army at Cedar Creek, October 19, and drove it back in confusion. At this critical moment Sheridan arrived from Winchester, "twenty miles away," checked the retreating columns, turned them "about face" and won the battle.

562. *What was the effect of Sheridan's successes?*

This was the most brilliant campaign of the war. In one month Sheridan had virtually annihilated Early's army. His own loss was 17,000.

563. *Describe the Red River expedition.*

Gen. Banks was sent up the Red River to loosen the Confederate grasp on that region and Texas. This campaign resulted in a Confederate triumph. Banks lost 5,000 men, 18 guns, and large supplies.

564. *When was the massacre of Fort Pillow, Ky.?*

On April 12. The Confederates were maddened by the sight of negro troops opposing them, and a terrible massacre followed.

565. *What brilliant naval victory did Admiral Farragut achieve?*

The capture of Mobile Harbor, August 5. He closed it against blockade-runners. The city of Mobile was not captured until April 12, 1865.

566. *Describe the expedition against Fort Fisher.*

Fort Fisher defended the Harbor of Wilmington, N.C. The expedition consisted of seventy vessels under Commodore Porter, and a land force under Gen. Butler. After a fierce bombardment, Dec. 24 and 25, Butler decided that the fort could not be taken by assault, and the army returned to Fortress Monroe. Commodore Porter asked for another trial. The same troops were sent back under Gen. Terry. By a series of trenches a column of troops worked themselves up to within two hundred yards of the

fortifications. At the word they rushed forward and burst into the fort. The hand-to-hand conflict within lasted for hours. Late at night the garrison surrendered, on January 15, 1865.

567. *What occurred at St. Albans, Vermont, on the 19th of October, 1864?*

A band of raiders from Canada assaulted the town, robbed the banks, seized horses from the livery stables and returned to Canada before the inhabitants recovered from their surprise. The entire raid was accomplished in a half-hour.

568. *Describe the attempt of Confederate emissaries to burn New York.*

On the night of November 25, 1864, an attempt was made to burn New York by saturating beds in the principal hotels with a mixture of phosphorus and oil. The attempt was discovered in season and a great disaster averted.

569. *What was the Alabama, and what damage did she do?*

She was a British steamer built in England, but officered and commissioned by the Confederate government. Her object was to prey upon Union commerce, and she succeeded in capturing more than sixty vessels. Her commander was Capt. Raphael Semmes.

570. *When, where, and with what result was the encounter between the Kearsarge and the Alabama?*

The engagement between the Kearsage and the Alabama took place off the coast of France, in the English Channel, June 15, 1864. The Alabama was sunk. Capt. John A. Winslow, commanding the Kearsage, rescued a part of the sinking crew. The English yacht Deerhound picked up the remainder and steamed off to the British coast. Capt. Semmes was among the number thus rescued.

571. *What other interesting naval operation occurred during this year?*

The destruction of the Confederate iron-clad Albemarle, at Plymouth, North Carolina. This was accomplished by Lieut. Cushing, who fastened a torpedo to the Albemarle, which exploded and sunk her.

572. *At the close of 1864, what was the political condition of the North?*

There was much dissatisfaction at the North with the conduct of the war; the debt was becoming enormous and paper money greatly depreciated. Grant had been repulsed at Cold Harbor and Early had made successful raids. In the midst of these calamities Abraham Lincoln was renominated by the Republicans, and the Democrats nominated Geo. B. McClellan, who stood firmly for the prosecution of the war but was not in full sympathy with the policy of the administration. Lincoln's popular majority was more than four hundred thousand.

573. *How did gold compare in value with greenbacks?*

In July, 1864, it required $2.90 in paper to buy one dollar in gold.

574. *What were the Confederate victories during this year?*

The Confederates won the battles of Sabine Cross Roads, Wilderness, Bermuda Hundreds, Spottsylvania, New Market and Cold Harbor. They resisted the Red River and Florida expeditions, two attacks upon Petersburg and one against Fort Fisher.

575. *Name the Union victories.*

They won the battle of Atlanta and the battles preceding it — Dalton, Resaca, Dallas, Lost Mountain, Kenesaw Mountain, Winchester, Fisher's Hill, Cedar Creek and Nashville. They captured Fort de Russy, the forts in Mobile Harbor, and Fort McAllister; Sheridan annihilated

Early's army; Sherman marched across Georgia and took Savannah; Thomas destroyed Hood's army, and the Confederacy was almost extinguished; only North and South Carolina remained in full control of the Confederacy.

1865.

576. *What was the plan of the campaign for 1865?*

Sherman was to move north from Savannah against Johnston, and then join Grant in a final attack upon Lee. Sheridan had swept down from the Shenandoah, cut the railroads north of Richmond, and formed in line before Petersburg. Wilson was in Alabama and Georgia, while Stoneman held the passes of the Alleghanies and waited in North Carolina for the issue in Virginia.

577. *What were General Sherman's movements?*

Early in February Sherman started north, and, though meeting with untold difficulties, swept on. He captured Columbia on Feb. 17, and on the following day Charleston was evacuated. Johnston fiercely opposed him at Averysboro and Bentonville, but was defeated. On the banks of the Neuse Sherman met Schofield and Terry, and the three, with a combined army of 100,000 men, waited for the final charge against the Confederacy. The distance traveled was more than 425 miles, one hundred of which was swamp.

578. *Describe the siege of Richmond.*

Lee was now shut up in Richmond, and his only hope of prolonging the struggle was to cut his way out. He decided to attack Grant's lines, cause a concentration of troops, and retreat by other routes before his plan was discovered. He failed, as Grant returned the advance with renewed vigor, capturing the outer defenses and preventing a retreat.

579. *Give a description of the battle of Five Forks.*

Sheridan, with his cavalry and heavy columns of infantry, pushed out from Grant's left wing and threw a heavy force behind the Confederate position at Five Forks. Assailed in every direction, the garrison was overwhelmed, and five thousand men were taken prisoners.

580. *What effect had this brilliant victory?*

Lee's position was made untenable. His right was turned and his rear threatened.

581. *Describe the capture of Petersburg and Richmond.*

On the morning of April 3, the Union army advanced in an overwhelming assault along the whole front. By noon the Confederate line of intrenchments, before which the Army of the Potomac had lain so long, was broken, and thousands of prisoners were captured. That night Petersburg and Richmond were evacuated. The next morning the Union troops took possession of the Confederate capital.

582. *When and to whom did Lee and Johnston surrender?*

Lee surrendered to General Grant at Appomattox, near Lynchburg, Va., on April 9, and Johnston to Sherman in North Carolina on April 26.

583. *When and how was Jefferson Davis captured, and what was done with him?*

He was arrested by a party of Union troops, in Georgia, on May 10, 1865, and imprisoned in Fortress Monroe, but was later released on bail furnished by Horace Greeley.

584. *How long did the Civil War last?*

A little more than four years.

585. *When and by whom was Abraham Lincoln assassinated?*

On the 14th of April, 1865, by John Wilkes Booth, at Ford's Theatre in Washington, D.C.

586. *What became of Booth?*

After shooting the President he sprang upon the stage. His spur caught in a flag used to drape the proscenium, and he was thrown heavily, breaking his leg. He escaped, mounted his horse and fled through Maryland, into Virginia, where he was overtaken, near Bowling Green, in a barn and shot.

587. *Give an account of the attack on Secretary Seward.*

On the same night of the assassination of Lincoln an accomplice stabbed Mr. Seward while lying ill in bed.

588. *What became of Booth's accomplices?*

Harold, Payne, Atzerodt, and Mrs. Surratt were hanged; Arnold, Mudd and O'Laughlin were imprisoned for life, and Spangler was sentenced for six years.

589. *What was the total number of troops called out in the war, and what the total number obtained?*

The number called out was 2,942,748, the number obtained was 2,690,401.

590. *How many men were lost in the war?*

The Union armies probably lost in battle, or through its effects, 300,000 men, while 200,000 were crippled for life. The Confederate loss is not positively known, but was undoubtedly almost as heavy.

591. *What was the cost of the war?*

The government's debt on August 31, 1865, was nearly $2,844,000,000. The daily expenses at one time reached the sum of $2,500,000.

592. *How was slavery forever abolished in the United States?*

By the thirteenth amendment to the Constitution, which was ratified on December 18, 1865.

593. *Who succeeded Lincoln as President?*

Andrew Johnson. He was sworn in on the day of Lincoln's death, April 15, 1865.

594. *What caused trouble between Johnson and Congress?*

The exercise of the veto power.

595. *What were the most important bills passed over the President's veto?*

The Freedmen's Bureau, the Civil Rights, and the Tenure of Office bills.

596. *What was the nature of these bills?*

The Freedmen's Bureau bill provided for the establishment of a department for the protection of the freedmen. The Civil Rights bill guaranteed to the negroes the full rights of citizenship. The Tenure of Office bill made it necessary that the consent of the Senate shall be obtained for the President's removal of any person from a civil office.

597. *On what charges was Johnson impeached?*

Various misdemeanors, and contempt of the Senate by violating the Tenure of Office act in an attempt to remove arbitrarily Edwin M. Stanton, Secretary of War. Johnson was acquitted, the two-thirds majority necessary for conviction lacking one vote.

598. *What is the fourteenth amendment to the Constitution? When adopted?*

It guarantees equal civil rights to all, and bases representation in each of the States on the number of voters. It was adopted July 28, 1868.

599. *What demand upon France was made by the United States government?*

The recall from Mexico of the French troops under Maximilian.

600. *What States were added to the Union during the war?*

West Virginia and Nevada.

601. *What was the Reconstruction policy of Johnson?*

He recognized the State governments that had been formed during the war under the protection of the Union army in Virginia, Tennessee, Arkansas and Louisiana. In the other States he appointed provisional governors and authorized the calling of conventions to form loyal governments. These conventions met, repealed the ordinances of secession, repudiated the Confederate debt, and ratified the thirteenth amendment. On these conditions Johnson claimed that the States, having never been legally out of the Union, should be restored to their rights in the Union. Pardon was proclaimed to those persons who had been engaged in secession with certain exceptions.

602. *When was Universal Amnesty declared?*

On Christmas day, 1868.

603. *What was the Reconstruction policy of Congress?*

Congress decided that the President had no power to prescribe the conditions for the readmission of the seceded States, and his proclamations and orders were treated as invalid. Tennessee was admitted, but the other States were placed under military rule. After a bitter and protracted struggle, governments were finally established in Arkansas, Alabama, Florida, Louisiana, North Carolina and South Carolina.

604. *What was the "iron-clad oath," and who were the so-called "carpet-baggers"?*

Congress made a requirement that every candidate for holding office should swear that he had not participated in the secession movement. As but few Southerners could conscientiously take this oath it was called "iron-clad,"

and the offices were filled by men who had come from the North during the war and soon after it. Owing to their recent arrival, these men were termed "carpet-baggers."

605. *How long was the government in establishing its Reconstruction policy?*

Three years. The Southern States were not represented in the government from 1861 to 1868. Virginia, Mississippi and Texas were not allowed to vote for President until after Grant's first administration.

606. *What proclamation was issued by Johnson in regard to the Fenians?*

The Fenians were making preparations to cross the Canadian frontier at Buffalo, N.Y., and St. Albans, Vt. Johnson issued a proclamation declaring the movement a violation of neutrality, and sent General Meade to execute the law.

607. *How was Alaska obtained?*

By purchase from Russia, in October, 1867, for $7,200,000 in gold. It contains 500,000 square miles.

608. *What treaty was made with China?*

In 1868 an embassy from China, in charge of Anson Burlingame, then our diplomatic representative in China, visited the United States. This was the first event of its kind in the history of the Chinese nation. A treaty was framed granting valuable commercial privileges.

609. *What repeated demand was made of the French government?*

During our civil war France attempted to establish an empire in Mexico, and Maximilian, an Archduke of Austria, was appointed emperor. The United States government protested, but with its hands full of its own affairs was unable to enforce the Monroe Doctrine. After the close of our war our government again demanded of Napoleon the re-

call of French troops. Maximilian, deprived of foreign aid, was defeated by the Mexicans, and on June 19, 1867, was shot after a trial by his captors.

610. *When was the Atlantic cable completed?*

In June, 1866. The first cable was attempted in 1856, and laid from New York to St. Johns, Newfoundland. In 1857 a vain effort was made to cross the ocean. In 1858 a cable was laid across the Atlantic and apparently worked successfully, but on September 1 it ceased to work. Cyrus W. Field, the projector of this enterprise, was not discouraged, and organized a third company, which in June, 1866, was successful. There are now several cables.

611. *What was the political situation at that time?*

The Republican party nominated Ulysses S. Grant and Schuyler Colfax; the Democrats, Horatio Seymour and Frank P. Blair. Virginia, Mississippi and Texas had not yet been "reconstructed" and were not allowed to vote.

GRANT'S ADMINISTRATION — 1869–1877.

612. *When was the Union Pacific Railway completed? How far is it from New York to San Francisco?*

In 1869. The distance from New York to San Francisco is about 3,300 miles.

613. *When was the fifteenth amendment formally proclaimed, and what is its nature?*

On March 30, 1870, and it provided that the right of the citizens of the United States to vote shall not be denied or abridged by the United States or any State, on account of race, color, or previous condition of servitude.

614. *Describe the important conflagrations of 1871 and 1872.*

A great fire broke out in Chicago on Sunday night, October 8, 1871. It was the most terrible conflagration in

modern times. Three thousand acres of almost solid blocks were devastated. Twenty-five thousand buildings were burned, $200,000,000 worth of property was destroyed, and 100,000 persons were rendered homeless. Contributions to the amount of more than $7,500,000 were sent to the suffering citizens from nearly all parts of the world. During the same autumn fires raged in the forests of Wisconsin, Minnesota and Michigan. Entire villages were consumed. In Wisconsin alone nearly 1,500 persons perished. On November 9, 1872, fire swept over sixty acres in the wholesale trade centre of Boston, and destroyed $70,000,000 worth of property.

615. *What was the Alabama claims difficulty with England, and how was it settled?*

The English government refused to pay for the damages to American commerce caused by the cruising of the Alabama. The dispute was settled by arbitration, in a convention at Geneva, Switzerland, the English government paying $15,500,000 to the United States.

616. *How was the dispute regarding the Northwestern boundary between the United States and British America adjusted?*

It was submitted to the Emperor of Germany and was decided in favor of the United States.

617. *What was the proposed annexation of San Domingo?*

The republic of San Domingo, comprising a large part of the island of Hayti, applied for admission to the United States, but was rejected. A commission appointed by the President to examine its condition reported favorably, but the measure was rejected by Congress.

618. *At the close of Grant's first term, what was the political situation?*

Grant was renominated by the Republicans, and the

Democrats endorsed the nomination of Horace Greeley, already the Liberal-Republican candidate.

619. *Give a short biography of Horace Greeley.*

Horace Greeley was one of our great self-made men. Born in poverty, he had risen from the humblest position to be the most renowned editor of the age. In 1841 he had founded the New York *Tribune*. When civil war seemed imminent, he had urged measures to avoid it, even advocating the policy of letting the discontented States depart in peace; but when war had been proclaimed he had urged a vigorous prosecution. At the close of the war he had pleaded for immediate conciliation. Just before the close of the Presidential canvass his wife died, and this, together with the desertion of friends and the excitement of the contest, unsettled his mind. He was confined in a private asylum, where he soon died.

620. *Describe the difficulties with the Modoc Indians.*

Having refused to stay upon their reservation in Oregon, troops were sent against them, whereupon they retreated to their fastnesses in the Lava Beds. Peace commissioners, proposing to arrange the difficulty, held a conference with the chiefs. In the midst of this council, the Indians treacherously murdered General Canby and the Rev. Dr. Thomas and wounded Mr. Meacham. The Modocs were then bombarded and forced to surrender. Captain Jack and several of the leaders of the band were hanged at Fort Klamath, October 3, 1873.

621. *Describe the panic of 1873.*

In the autumn of 1873 Jay Cooke & Co., bankers, of Philadelphia, became too heavily involved in railroad enterprises, especially the Northern Pacific, and failed. The failure produced a financial crisis, and hundreds of prominent firms all over the Union were involved in ruin. The money market became stringent, and a stagnation of

business followed. But for the timely aid of the government in throwing several millions of dollars into the market, the distress would have been much greater. The name "Black Friday" was applied to the day when almost every man and firm in business seemed to be threatened with bankruptcy.

622. *What centennial anniversaries were observed with great enthusiasm in 1875 and 1876?*

The hundredth anniversary of the battle of Lexington, of the battle of Bunker Hill, and of the signing of the Declaration of Independence.

623. *Describe the main features of the Centennial Exhibition.*

Fairmount Park, in Philadelphia, was the scene of the display. More than two hundred buildings were scattered over the extensive ground, the main structure covering twenty acres. Exhibits were gathered from every clime. The exhibition lasted six months, from May to November, and the total number of visitors was 9,910,966.

624. *What war with the Sioux Indians occurred, and what terrible defeat overtook the government forces?*

A band of Sioux took the war-path. Troops were sent to force them to return to their reservation. On the 25th of June, 1876, General Custer suddenly came upon the enemy and a desperate fight followed, in which Custer and his entire command were killed.

625. *In 1876, who were nominated for President?*

The Republicans nominated Rutherford B. Hayes and Wm. A. Wheeler; the Democrats, Samuel J. Tilden and Thomas A. Hendricks; the Greenback party, Peter Cooper and Samuel F. Cary.

626. *What was the result of the election?*

Both Republicans and Democrats claimed the election,

the Republicans insisting that the States of South Carolina, Florida and Louisiana had been carried by the Democrats by fraud.

627. *How was Rutherford B. Hayes chosen President?*

In order to reach a settlement, a Joint Electoral Commission was appointed, composed of five United States Senators, five United States Representatives, and five Justices of the Supreme Court. This body decided that 185 electoral votes had been cast for Hayes and Wheeler, and 184 for Tilden and Hendricks.

628. *What was the feeling among the American people in regard to the settlement of this question?*

The Republicans were jubilant, while the Democrats denounced the decision, claiming that the Commission had decided, not by evidence, but on partisan grounds, as eight of them were Republicans and seven were Democrats; therefore Hayes was termed by his opponents the "eight-to-seven" President.

629. *When Samuel J. Tilden was asked if his party should stand by his election, what reply did he make?*

To the delegation who sought his advice he insisted that no act of theirs should imperil the country.

HAYES'S ADMINISTRATION — 1877–1881.

630. *What promise was made by Hayes in regard to "rotation in office"?*

To make "no dismissal except for cause, and no promotion except for merit."

631. *What was President Hayes's Southern policy?*

One of conciliation. The Federal troops which had hitherto sustained the Republican State governments in South Carolina and Louisiana were withdrawn and Democratic officers at once took control of the local affairs. He

also appointed Judge Key, a Southerner and an ex-Confederate, Postmaster General.

632. *What railroad strike occurred in 1877?*

On nearly all of the principal railroads in the Northern States a strike of workmen occurred, the cause being a general reduction of wages. At Pittsburg, Pa., the strike grew into a terrible riot, in the course of which vast amounts of property were destroyed; it was quelled only by the use of troops. In the riot more than one hundred lives vere sacrificed, and the Pennsylvania Railroad suffered a loss of nearly $3,000,000 worth of property.

633. *What was the Bland Silver Bill?*

In 1873 Congress demonetized silver, and made gold the sole standard of our currency. Opposition arose to this act, and in 1878 a bill was passed remonetizing silver and making the standard silver dollar a legal tender for the payment of debts. The government was required to purchase from $2,000,000 to $4,000,000 worth of silver bullion every month, and coin it into dollars. The bill was called the "Bland bill," because Representative Bland of Missouri set it in motion in Congress.

634. *Describe the yellow fever of 1878.*

In the summer of 1878 it broke out in New Orleans and spread with alarming rapidity northward along the Mississippi into Missouri and Tennessee. More than 7,000 deaths were reported.

635. *When did the resumption of specie payments occur?*

January 1, 1879. On December 17, 1878, gold, for the first time since January, 1862, sold in New York at par.

636. *What Indian difficulties took place in 1879?*

The Ute Indians at the White River Agency, being dissatisfied on account of the encroachments of miners and the non-payment of money promised by the govern-

ment, took up arms and massacred and abused the whites at the agency. The revolt was suppressed by United States troops.

637. *In 1880, what was the population of the United States?*

The census of 1880 showed a population of more than 50,000,000. The increase of inhabitants from 1870 to 1880 was some 12,000,000.

638. *What were the Fishery Awards?*

Difficulties sprang up between Great Britain and the United States because of the fisheries on our northeast coast. The matter was left to an international commission of arbitration which awarded Great Britain the sum of $5,500,000.

639. *What were our treaties with China in 1880?*

One in relation to commerce, and the other granting to our government the regulation of Chinese immigration.

640. *Was President Hayes's administration favorable to his party?*

A large element in the party were not satisfied with his policy of conciliation toward the South. They believed that, if the electoral vote had legally been cast for him as President, it must also have been cast for the Republican State officers, and that it was the duty of the President to protect those officers by the presence of United States troops at the State capitals.

641. *Who were the nominees for the Presidency to succeed President Hayes?*

The Republicans nominated James A. Garfield and Chester A. Arthur. The Democrats nominated Winfield S. Hancock and William H. English. The Greenback-Labor party nominated James B. Weaver and Benjamin J. Chambers.

642. *What was the principal issue between the Republican and Democratic parties?*

The tariff question.

643. *What were the principles advocated by the Greenback-Labor party?*

The Greenback-Labor party was opposed to the issue of paper money by any private corporation; they insisted that it should be issued solely by the government and made a full legal tender. They claimed also that monopolies were fast controlling all kinds of business and that labor was becoming a mere slave to the avarice and greed of capital; that legislation was enacted for the rich without due regard for the poor; and that our factories were overburdensome to women and children.

GARFIELD AND ARTHUR'S ADMINISTRATION.

644. *When was Garfield inaugurated President?*

March 4, 1881.

645. *What gigantic swindling system was detected in the Post-office Department?*

The Star Route frauds, whereby contracts in the West for carrying the mails were so manipulated that great wrongs and robberies were perpetrated. Within two months contracts to the amount of nearly $2,000,000 were annulled. The alleged conspirators were tried, but judgment was never rendered against them.

646. *When was President Garfield assassinated?*

On the morning of July 2, 1881, by Charles J. Guiteau, at a railway station in Washington, D.C.

647. *What was the feeling of the country in regard to the assassination, and what became of the assassin?*

The assassination produced profound and universal sorrow. Preparations for the celebration of Independence

Day were generally abandoned. President Garfield died on the 19th of September following, at Long Branch, N.J. He is buried at Cleveland, O. The assassin was tried, convicted and hanged.

648. *What testimonial of respect was shown by the Queen of England to Mrs. Garfield?*

By direction of the Queen a wreath of flowers was placed upon Garfield's coffin, as a sign of her sympathy with the martyred President's wife.

649. *When did Chester A. Arthur become President of the United States?*

Immediately on being informed of the President's death he took the oath of office.

650. *What was the extent of the flood in the Mississippi Valley in 1882?*

Nearly 100,000 persons were rendered homeless.

651. *Describe the East River Bridge.*

A suspension bridge connecting New York City and Brooklyn, 5,989 feet long, was opened to the use of the public in 1883. It was begun January 3, 1870. The height of the towers is 278 feet and the length of the suspended span from tower to tower 1,596 feet. The height from the water, at the center, is 135 feet. The four great cables are $15\frac{3}{4}$ inches in diameter, and each cable contains 5,296 parallel wires of galvanized steel, oil-coated, closely wrapped, and weighing, with covering, $897\frac{1}{8}$ tons.

652. *What is the Civil Service Act, and when was it passed?*

It was passed in 1883, and aimed to regulate appointments and promotions in the civil service of the United States by means of examinations instead of political preferment.

653. *When was letter postage reduced from three cents to two cents?*

October 1, 1883.

654. *How was Alaska recognized as a Territory?*

In 1884 a bill was approved by which a governor, judge, marshal and other officers were to be appointed for a term of four years, but no legislative assembly or Congressional delegate was authorized. Sitka was made the temporary seat of government.

655. *How was Chinese immigration regulated?*

It was forbidden by a law passed in 1882, for ten years.

656. *Who were nominated for President in 1884?*

The Democrats nominated Grover Cleveland and Thomas A. Hendricks. The Republicans, James G. Blaine and John A. Logan. The Greenback-Labor party, B. F. Butler and A. M. West. The Prohibitionists, John P. St. John and William Daniel.

657. *What were the chief subjects of discussion in this campaign?*

Between the Democrats and Republicans, the tariff and scandalous personalities. The Greenback-Labor party espoused the same policies as four years before, while the Prohibitionists demanded the suppression of the liquor traffic by the general government.

658. *Who was elected President, and by what popular majority? Which State held the deciding vote?*

Grover Cleveland. New York State held the deciding vote, and its Democratic majority was about 1,045.

CLEVELAND'S ADMINISTRATION — 1885–1889.

659. *When did General Grant die?*

July 23, 1885, at Mount McGregor, N.Y.

660. *Where and when did Vice-President Hendricks die?*

At his home in Indianapolis, November 25, 1885.

661. *How many times has the Vice-Presidency been made vacant by death?*

Five times.

662. *What other noted men died shortly after Mr. Hendricks?*

George B. McClellan, Winfield S. Hancock, Charles Francis Adams and Chester A. Arthur.

663. *What notable events occurred in 1886?*

The Haymarket riot in Chicago, May 3. The riot of Milwaukee, May 6. The earthquake of Charleston, S.C. The conviction of eight Anarchists in Chicago. The rise of the Knights of Labor to prominence. Great gales off the coast of Texas, and wrecks on Lakes Michigan and Superior. The unveiling of the statue, "Liberty Enlightening the World," in New York Harbor.

664. *What noted man died December 26, 1886?*

John A. Logan, United States Senator from Illinois.

EVENTS OF 1887–1889.

665. *What important commercial act was passed by Congress in January of this year?*

The Inter-State Commerce Act. It was signed by the President, February 4, 1887.

666. *What bill originated in the Senate in regard to the Canadian fishery question?*

The Retaliation Act which placed in the hands of the President the power to prohibit the importation of the products of the Canadian fisheries, or, if necessary, to suspend all commerce with Canada until the differences between the United States and that country were settled.

667. *What was the result of the election of 1888?*

The Republicans elected Benjamin Harrison President, and Levi P. Morton Vice-President. The election was exciting and majorities in the doubtful States small.

668. *In February, 1889, what important office was added to the Cabinet?*

Secretary of Agriculture.

669. *What legislation in the same month was of special interest to the people of the Northwest?*

An act by which North and South Dakota, Washington and Montana were admitted as States.

670. *What interesting anniversary occurred in 1889?*

The centenary of the first inauguration of Washington as President of the United States. President Harrison in a proclamation had recommended that on "Thursday, April 30, at the hour of nine in the morning, the people of the entire country repair to their respective places of Divine worship, to implore the favor of God that the blessings of liberty, prosperity, and peace may abide with us as a people." This recommendation met with general observance. The day was also celebrated by patriotic displays in all the cities and principal towns of the Union.

EVENTS OF 1890.

671. *What important tariff and silver legislation was enacted in 1890?*

"The McKinley law," so called, made important changes in the tariff, generally in the direction of an increase in the rate of protective duties. The Sherman act was a law repealing the Bland act, and requiring the government to purchase monthly 4,500,000 ounces of silver bullion at the market price and coin a part of it into standard dollars.

672. *What law did Congress pass in 1891 bearing upon copyright?*

A law providing that the President may, under certain conditions, by proclamation extend to foreigners the privileges of copyright in the United States.

EVENTS OF 1891–1892.

673. *How near to the verge of war did the United States come during Harrison's administration?*

Some American sailors were murderously attacked in the streets of Valparaiso by a Chilian mob. Our government demanded reparation in damages and an apology, under pain of war. Chili was just coming out of a civil war of her own, and for reasons of domestic policy held back a little, but succumbed just as the period fixed in the American ultimatum was expiring.

674. *What were the effects of the McKinley law?*

Its opponents declared that the operation of the "McKinley law" resulted in a general advance in the cost of living. Its supporters claimed that it increased the general prosperity. At the next general election, the Republicans lost the House of Representatives and were supplanted by a large Democratic majority.

675. *What was the result of the election of 1892?*

The Democrats elected Grover Cleveland President and Adlai E. Stevenson Vice-President. The campaign was notable for the absence of much of the usual excitement. The general verdict appeared to be against a continuance of the high protective rates of the McKinley tariff.

EVENTS OF 1893–1894.

676. *What event of international interest marked the year 1893?*

The World's Columbian Exposition, held at Chicago,

commemorating the 400th anniversary of the discovery of America by Columbus.

677. *Did any exceptional political occurrences mark this year?*

(*a*) President Cleveland convened Congress in extra session in August to consider the alarming financial depression which had recently set in. This session ended with the repeal of the silver-purchase clause of the Sherman Act of 1890.

(*b*) A dispute between this country and England concerning the seal industry in the Bering Sea, which had been assuming a threatening aspect, was amicably settled by international arbitration.

678. *What important question engaged the attention of the Congress and the people in 1894?*

A protracted discussion by Congress (Democratic) resulted in the enactment of a revised tariff law repealing the duties on imported wools, and other important raw materials, and reducing duties on many manufactured or partly manufactured articles.

679. *What was the result of the Congressional elections of 1894?*

A general "overturn," replacing the Democratic majority in the House of Representatives by a larger Republican majority.

680. *What occurrences in the labor-field excited general anxiety in 1894?*

A strike of railroad employees at Chicago assumed an almost revolutionary character by reason of violence, incendiarism, and general lawlessness. President Cleveland ordered United States troops to the scene of the troubles, thus terminating the episode.

EVENTS OF 1895–1896.

681. *What great question was brought most prominently to the attention of the people in 1895–1896?*

The general question of the settlement by arbitration of all differences with other nations. A dispute between Great Britain and Venezuela, concerning the boundary line between Venezuela and British Guiana, drew forth from President Cleveland a sharp protest, coupled with an intimation that our government, in support of the "Monroe Doctrine," would, if necessary, go to war. After considerable diplomatic correspondence it was agreed to submit the Venezuelan boundary question to arbitration, which our government pronounced satisfactory.

682. *What was the result of the general election of 1896?*

The Republicans elected William McKinley President and Garrett A. Hobart Vice-President, with a working majority in the House of Representatives, on platform declarations assuring the maintenance of the existing gold standard in our currency. The Democrats had demanded the unlimited free coinage of silver at the current ratio of 16 to 1. Next to the coinage question, the most important issue of the campaign was that of the duties on imports, McKinley representing those who desired higher tariffs as a protection to domestic industries.

EVENTS OF 1897–1898–1899.

683. *What was the first important act during the McKinley administration?*

The calling of an extra session of Congress in March, 1897, for the enactment of a new protective tariff, styled the Dingley Act, in honor of Representative Dingley of Maine, its author. The act was signed July 24, 1898.

684. *Did either House of Congress do anything else of note at the extra session?*

The Senate rejected a general treaty of arbitration between Great Britain and the United States.

685. *Was this the only treaty of consequence before the Senate at this session?*

No. A treaty with the republic of Hawaii, for its annexation to the United States, was sent in by President McKinley, but went over till the regular session the following winter and then failed.

686. *How did its failure affect Hawaiian annexation?*

It made it necessary to effect the annexation by joint resolution as in the case of Texas. This was finally accomplished in the summer of 1898.

687. *What remarkable separation occurred between the prices of silver and wheat in 1897?*

Wheat rose in price to $1.19 cents a bushel, and silver fell to $45\frac{53}{100}$ cents an ounce.

688. *Was any effort made to improve the value of silver?*

An international monetary commission was appointed by President McKinley. It visited England, France and Germany in behalf of an agreement between those countries and the United States for maintaining their silver coinage at a stated ratio of value as compared with gold; but their efforts were fruitless.

689. *What noteworthy event for New York occurred in 1897?*

The enactment of the Greater New York law by the State Legislature, uniting Brooklyn, Staten Island and other adjacent territory with New York City proper, and raising it in population to the second rank, as to both area and population, among the cities of the world. The consolidation went into effect January 1, 1898.

690. *What important general legislation was enacted by the Fifty-fifth Congress at its winter session of 1897–1898?*

A bankruptcy law; resolutions declaring Cuba free, and thus bringing about a war with Spain; and the War Revenue Act.

691. *How long did the war with Spain last?*

Actual hostilities began April 21, 1898, with the severance of diplomatic intercourse, and ended August 12, 1898, with the signing of a peace protocol at Washington.

692. *What were the principal battles in this war?*

The battle of Manila Bay, on May 1, in which Admiral Dewey destroyed the entire Spanish fleet in Philippine waters; the sea-fight off the mouth of the harbor of Santiago, Cuba, July 3, when the ships under Admirals Schley and Sampson destroyed the fleet of the Spanish Admiral Cervera; the battles incidental to the capture of Santiago, between June 24 and July 17, and the battle which ended the siege of Manila and brought about its surrender, fought just before the news of the peace negotiations reached the Philippines.

693. *What other exhibitions of American heroism distinguished this war?*

The sinking of the collier Merrimac, in the narrowest part of the entrance to the harbor of Santiago, to blockade the harbor. This was accomplished by Naval Constructor Hobson, with a picked crew of seven men, at night, under fire of the Spanish shore batteries. Col. Funston's bravery in the Philippines was also especially notable.

694. *What brought about this war?*

The state of disquietude in the United States caused by the long and bloody war carried on by the Spanish army in Cuba in its attempt to put down the rebellion there. The acme of outraged sentiment in the United States was

reached when, on February 15, the American battleship Maine was destroyed in the harbor of Havana by a mysterious explosion, causing the death of 264 American officers and seamen.

695. *What were the principal terms of the peace protocol?*

The cession of Porto Rico by Spain to the United States; the evacuation of that island and of Cuba; the renunciation of Spanish sovereignty in Cuba; and the reference of the future disposal of the Philippine Islands to an international conference or Peace Commission.

696. *Who were appointed to represent the United States in the peace conference, and where did the conference hold its sessions?*

Senators Davis, Frye and Gray; William R. Day, late Secretary of State, and Whitelaw Reid of New York. The sessions of the conference were held in Paris.

697. *What was the character of the War Revenue Act?*

It provided for the issue of bonds to raise money for carrying on the war, and for a far-reaching system of internal taxation to supply the means for meeting the principal and interest of the debt thus created and supply the government with additional revenue.

698. *What did the treaty of peace provide?*

That Spain should give up all her remaining possessions in the Western Hemisphere, as forecast by the protocol, and cede to the United States the Philippine Archipelago in consideration of the payment of $20,000,000 by the United States, and also the island of Guam in the Ladrones; and that each government should relinquish all its own claims for indemnity and those of its citizens or subjects, growing out of the Cuban war. The treaty contained also some provisions securing especially favorable commercial privileges to Spain in her late possessions transferred to the United States.

699. *When was peace formally declared?*

On April 11, 1899, when the ratifications of the treaty by the two nations were exchanged at the Executive Mansion in Washington.

700. *What dramatic coincidence attended the vote of the United States Senate for the ratification of the treaty?*

The struggle over ratification had been very fierce, a large number of Senators objecting to the assumption of sovereignty by the United States Government in the Philippines. On February 4, 1899, after the 6th had been fixed as the date for the final vote, the Filipino insurgent army, under General Emilio Aguinaldo, opened fire upon the American army in the outposts of Manila. This was obviously done for the purpose of emphasizing the demand of the Filipinos for independence as opposed to annexation to the United States. It seemed to have an effect the reverse of what was intended. Some of the Senators who had been inclined to listen to the plea of the Filipinos now declared that this violence must be punished. When the vote was taken on February 6, it stood 57 to 27, or one more than the requisite two-thirds in favor of the treaty.

701. *Has the United States any other foreign complications on hand at present?*

Yes. A joint commission representing Great Britain, Canada and the United States, which met in Washington in the fall of 1898, suspended its sessions for a time in the following spring, because, in considering the various subjects which had caused irritation between the United States and the other countries involved, it could not reach a satisfactory agreement on a boundary line between Alaska and the British possessions in the American Northwest. In Samoa, also, trouble has grown out of the tripartite system of government, the British and American repre-

sentatives espousing the cause of Malietoa, one of the claimants to the Samoan throne, while the German representatives sided with his rival, Mataafa. The dissension became so violent that Rear-Admiral Kautz, of the United States Navy, was sent to Apia with a suitable force and was obliged to do some fighting with the natives of Mataafa's faction.

QUESTIONS AND ANSWERS

ON

GEOGRAPHY.

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1. *From what is the term* geography *derived?*

From the two Greek words *ge* (earth) and *grapho* (I describe).

2. *How many kinds of geography are there?*

Three: mathematical, physical and political.

3. *Define mathematical geography.*

It treats of the form, magnitude and motions of the earth, and of the various imaginary lines on the surface.

4. *Give a definition of physical geography.*

It is a study and explanation of the solid and fluid parts of the earth's surface, the atmosphere, and all animal and vegetable life.

5. *What is political geography?*

A treatise on the various countries on the earth's surface, the people inhabiting them, their governments, etc.

6. *What is the shape of the earth?*

A sphere flattened at the two ends of one of its diameters, called the poles.

7. *How may its rotundity be proved?*

By journeying around it.

Approaching vessels, moreover, show their masts first, while their larger parts, the hulls, are still outside the line of vision.

The shape of the earth's shadow, as cast on the moon during an eclipse, is always round; and, finally, measurements made by astronomers, bear like witness.

8. *What is supposed to have flattened the earth at the poles?*

Its revolution while in a plastic condition.

9. *How much greater is the diameter at the equator than the diameter at the poles?*

About twenty-six miles, the diameter at the equator being 7,925 miles.

10. *What is the area of the earth's surface?*

About 196,900,278 square miles.

11. *What is the earth's bulk?*

About 260,000,000,000 cubic miles.

12. *What is its weight?*

About 5,852,000,000,000,000 tons.

13. *What is its specific gravity?*

5⅝ times heavier than water.

14. *What is the horizon?*

That line where the sky appears to meet the earth.

15. *What is the axis of the earth? What are its poles?*

The diameter on which it performs its daily revolutions; the poles are the points where this axis meets the surface.

16. *How many revolutions has the earth? Define each.*

Two: diurnal and annual. Its diurnal revolution is its motion on its axis from west to east; its annual is its rotation around the sun.

17. *Give proofs of the earth's rotation.*

The motion of falling bodies is one of the most convincing proofs, while the fact that the sun and distant planets appear to revolve around the earth once in twenty-four hours is a reasonable proof of the earth's rotation.

18. *Explain how falling bodies prove it.*

If the earth had no rotary motion, a ball dropped from a high tower would strike the base at a point exactly vertical from the place of starting; but, as the earth has this motion, the top of the tower must move faster than the bottom, and the ball will strike outside of the line of the base, the difference being about proportional with the difference between the velocity of the top and that of the base.

19. *How do we know that the earth rotates from west to east?*

Because the sun appears to rise in the east, and also because a falling ball will strike outside of the base on the east side of a tower and on the inside of the base on the west side.

20. *What is the exact time of its rotation?*

Just 23 hours, 56 minutes, and 4.09 seconds.

21. *What is the velocity of this rotation?*

On the equator it is about 1.042 miles per hour.

22. *Where is the velocity least?*

The velocity diminishes from the equator to the poles, where it becomes nothing.

23. *What causes day and night?*

The revolution of the earth on its axis.

24. *What is called the circle of illumination?*

The great circle which separates the dark side of the

earth from the light side, or the dividing line between night and day.

25. *On what does the relative length of the day and night depend?*

On the position of the earth toward the sun in its annual revolution. The sun, apparently moving north in the summer, produces in the northern hemisphere an increased circle of illumination and hence increased length of daylight, while in winter the same movement occurs in the southern hemisphere, decreasing, producing an increase of the length of daylight there.

26. *What causes the seasons?*

The revolution of the earth around the sun.

27. *What is the earth's orbit? Its estimated length?*

The course it takes in its annual motion; the estimated length of the orbit is about 600,000,000 miles.

28. *What is the earth's motion around the sun called?*

Its annual revolution.

29. *What is the exact time of a complete revolution?*

Just 365 days, 6 hours, 9 minutes, 9.6 seconds.

30. *Define a siderial year.*

It is the exact time of a revolution.

31. *Define a tropical year.*

The interval between one March equinox and the next which is 365 days, 5 hours, 48 minutes, 49.7 seconds.

32. *Which value is taken for the civil year?*

The tropical year, or 365¼ days, nearly.

33. *How great is the earth's annual motion?*

About 68,000 miles an hour.

34. *What position does the earth occupy in the universe?*

The earth is one of a group of non-luminous bodies which revolve around the sun, accompany it through space, and reflect its light.

35. *What bodies compose the solar system?*

The sun, eight large bodies called planets, and, as far as is now known, about one hundred and seventy-five smaller bodies called planetoids or asteroids, besides many comets and meteors. Some of the planets have bodies called moons or satellites moving around them.

36. *What position does the earth occupy in this system?*

It belongs to the group nearest the sun, and is third from the sun in position.

37. *What is the distance of the earth from the sun?*

About 92,000,000 miles.

38. *Has the sun any other motion than its movement through space?*

The sun, all the primary planets, and their satellites, rotate from west to east.

39. *To what theory has the uniformity of direction of the movements of the planets and sun given rise?*

To a theory by La Place called the nebular hypothesis, which assumes that originally all material of which the solar system is composed was scattered throughout space in the form of very tenuous matter called nebula. It being granted that this matter began to accumulate around a centre, and that rotary motion was acquired, it can be shown on mechanical principles that such a system as our own might be evolved.

40. *What governs the velocity of the different planets?*

As the circumference of the orbits of the planets increases with their distance from the sun, their velocity at

the same time diminishes, and the time of revolution, or length of year, increases correspondingly.

41. *What causes the continual revolution of the earth and other planets?*

On the supposition that the earth was given a *projectile force* when separated from the nebulous sun, it would, if left to itself, have continued to move in one direction; but the attraction of the sun retained it in its orbit, its motion on its axis remaining unchanged.

42. *What gives the earth's orbit its elliptical shape?*

The unequal attraction of the neighboring planets and of the sun. In the course of its revolution its positions are such that at certain points it is drawn away from the sun, and this produces an orbit longer one way than another.

43. *Why is it cold in winter and warm in summer?*

Because of changes in the direction of the sun's rays. It is on the same principle that morning and evening are cooler than midday.

44. *What are zones? How many are there? What is the width and situation of each?*

Belts or divisions of the earth, bounded by the tropic and polar circles. There are five of them — two frigid, two temperate, and one torrid. The north frigid lies between the North Pole and the Arctic Circle, and is $23\frac{1}{2}°$ in width; the north temperate lies between the Arctic Circle and the Tropic of Cancer, and is $43°$ in width; the torrid lies between the Tropic of Cancer and the Tropic of Capricorn, and extends $23\frac{1}{2}°$ both north and south of the equator; the south temperate is of the same size as the north temperate, and lies between the Tropic of Capricorn and the Antarctic Circle; the south frigid is all of the earth's surface within the Antarctic Circle.

45. *What is the ecliptic?*

A great circle whose plane coincides with that of the earth's orbit.

46. *Why is the ecliptic so called?*

Because solar and minor eclipses can take place only when the moon is very near its plane.

47. *What is the inclination of the earth's axis to the plane of its orbit?*

It is $66\frac{1}{2}°$, or $23\frac{1}{2}°$ out of a perpendicular direction.

48. *Why are the zones given their respective widths?*

During the revolution of the earth around the sun a part of the earth's surface comes to be directly perpendicular to the sun's rays. This belt, 47° wide, is enclosed by the tropics and termed torrid, meaning very hot. Geographers have decided that each temperate zone should extend to that line where the duration of the longest day is twenty-four hours; and as the inclination of the earth is $23\frac{1}{2}°$, that line should be $23\frac{1}{2}°$ from the poles, where the Polar Circles have been drawn.

49. *What would be the influence on the earth's climate if its axis should become horizontal to the plane of its orbit?*

What the general influence of such a change would be is hard to say; but during the annual revolution of the earth every point on the entire surface would come, at some time, directly perpendicular to the sun's rays, and become torrid. When one pole would come perpendicular to the sun's rays, the other would necessarily be in darkness, and frigid. The length of the longest day at the equator would be twenty-four hours, and would occur every six months. This would give, at the equator, four zones in one year — two torrid and two temperate.

50. *Why would the inclination of the earth affect the climate?*

If the earth were perpendicular to the plane of its orbit there would be no change of seasons. As it becomes inclined, the attitude of the earth toward the sun is continually changed in the course of its annual revolution, and this change must produce a diversity of climate. It is by such inclination that the temperate zones acquire four seasons.

51. *Supposing the earth's inclination to be 30° or any other given figure, how can we ascertain the width of the several zones?*

The inclination of the earth will vary the line where the length of the longest day is twenty-four hours, 1° for every degree of inclination. As it is now $23\frac{1}{2}$°, the line must be $23\frac{1}{2}$° from the poles, or the boundary of the frigid zones. If the inclination should be 30°, the frigid zones would extend 30°, and 30° each side of the equator would become perpendicular to the sun's rays, making the torrid 60°, the temperate 30° and the frigid 30°; and so on of any other degree of inclination. The frigid zone would be in width the number of degrees of the inclination of the earth; the torrid would be the same each side of the equator, and the temperate what lay between.

52. *At what season is the earth nearest the sun?*

About January 1.

53. *Explain why it is nearer at one time than at another.*

As the orbit is an ellipse, the narrower parts must bring it, in its revolution around the sun, nearer the sun than the wider parts.

54. *When is the earth at its perihelion?*

When it is nearest the sun.

55. *When at its aphelion?*

When it is farthest from the sun.

56. *What are the equinoxes? How many and what are they called?*

They are the times of the year when the sun's vertical rays fall on the equator. There are two, the vernal and the autumnal.

57. *On what days of the year do they occur?*

The vernal equinox takes place on the 20th of March and the autumnal on the 22d of September.

58. *What are the equinoctial points?*

Where the ecliptic intersects the equator at two points diametrically opposite to each other.

59. *What are the solstices?*

They are the times when the vertical rays of the sun reach their farthest northern or southern limit and fall on one or the other of the tropics.

60. *How many are there, and what are they called?*

Two, the summer and winter solstice.

61. *On what days of the year do they occur?*

The summer solstice on the 21st of June, and the winter solstice on the 21st of December.

62. *What are the solstitial points?*

The points midway between the equinoxes.

63. *What is a compass?*

A magnetic needle playing upon a pivot and always pointing nearly due north and south.

64. *What are known as the cardinal points?*

The cardinal points are north, south, east and west.

65. *What are the semi-cardinal points?*

Northeast, northwest, southeast, southwest.

66. *How many circles divide the earth?*

Several great and small circles. The meridian circles and the equator are great circles; the tropic and polar circles, and the parallels of latitude, are small circles. There are also circles of position or measurement, and climatic circles.

67. *Define great and small circles.*

All circles which divide the surface of the sphere into two equal parts are great circles; all others are small circles.

68. *Define circles of position or measurement.*

They are the circles used to determine the geographical positions of places.

69. *Define climatic circles.*

Circles used to mark important climatic boundaries and are termed climatic circles or parallels.

70. *Name the circles of position.*

The equator, meridian circles and parallels of latitude.

71. *Name the climatic circles.*

The tropics and polar circles, and the ecliptic.

72. *Define a quadrant.*

It is one quarter of a circle, or 90°.

73. *How is every circle divided?*

Into 360 equal parts, called degrees.

74. *What is a map?*

A drawing representing the whole or a part of the earth's surface.

75. *What are the lines, or circles, on a map?*

The equator, meridian circles, parallels, tropic and polar circles.

76. *What is the equator?*

A great circle equally distant from the poles.

77. *Through what countries does the equator pass?*

It crosses Brazil, Colombia, Ecuador, Borneo and Sumatra in the East Indies, British East Africa, the Kongo Free State and French Kongo.

78. *What is a meridian circle? What is a meridian?*

A meridian circle is any great circle passing through the poles. A meridian is half a meridian circle.

79. *What is longitude?*

The distance either east or west from any given meridian.

80. *On what is longitude measured?*

On the parallels and the equator.

81. *From what meridians do we reckon longitude?*

The one which passes through Washington, D.C., and the one near Greenwich, in England.

82. *How many degrees west of Greenwich is Washington?*

About 77°.

83. *What is the greatest longitude a place can have?*

180° either east or west.

84. *Can a place have no longitude?*

If situated on the meridian from which we reckon, it can have no longitude.

85. *Reckoning from the meridian at Washington, what is the latitude and longitude of Quito?*

It has no latitude, and but 1° of longitude, west.

86. *What is the length of a degree of longitude?*

Sixty geographical miles at the equator, but it grows gradually less as it approaches the poles; at latitude 30° it is about fifty-two geographical miles; at latitude 60° it is thirty, and at the poles it is nothing.

87. *Why does the length of a degree of longitude decrease after leaving the equator?*

All meridian lines meet at the poles; and as a degree of longitude is enclosed between meridian lines, the length must decrease as the lines approach the poles.

88. *What is a prime meridian?*

The meridian from which longitude is reckoned.

89. *Where is a prime meridian usually located?*

Each nation usually takes the meridian of its own capital.

90. *Through what States does the meridian of Washington pass?*

New York, Pennsylvania, Maryland, Virginia and North Carolina.

91. *What countries in Asia are crossed by the same meridian circle?*

Siberia, the Chinese Empire and British India.

92. *Explain how we reckon the difference in time between two places when the difference of longitude between them is given, or* vice versa?

As there are 360° of longitude it follows that in the earth's rotation one hour of time must pass through $\frac{1}{24}$ of 360°, or 15°. This reduced makes 1° in four minutes. Then knowing the difference in longitude the time is easily found, or, if the difference of time is known, a reversed process must give the difference in longitude.

93. *What large city in Asia is nearly opposite Philadelphia?*

Pekin.

94. *What is latitude?*

The distance north or south of the equator, according to its direction, is north or south latitude.

95. *On what is latitude measured?*

Upon the meridians.

96. *What is the highest degree of latitude?*

90°, which is at the poles.

97. *What is the length of a degree of latitude?*

Sixty geographical, or 69¼ statute miles.

98. *What is the basis of a geographical mile?*

One minute of longitude at the equator.

99. *Through what countries and bodies of water does the Tropic of Cancer pass?*

Bahama Islands, Gulf of Mexico, Mexico, Pacific Ocean, Hawaiian Islands, near Canton China, British India, Arabian Sea, Arabia, Egypt, and Atlantic Ocean.

100. *The Tropic of Capricorn?*

Brazil, Paraguay, Argentine Republic, Chili, Pacific Ocean, Australia, Madagascar, South African Republic, British South Africa, Damara Land, and Atlantic Ocean.

101. *The Arctic Circle?*

Greenland, Northwest Territories, of Canada, Alaska, Siberia, Russia, Sweden, Norway and Atlantic Ocean.

102. *The Antarctic Circle?*

Land has been discovered in this region, but no effort has been made to chart and name it.

103. *Why is it colder at the Antarctic Circle than at the Arctic?*

In the northern hemisphere there are vast tracts of land

to receive the rays of heat and warm the atmosphere; but towards the south pole the rays of heat seem to be lost on the great bodies of water, and the air is not warmed.

104. *What part of North America is in the same latitude as England and Ireland?*

The southern part of Canada.

105. *How does the climate of Labrador differ materially from that of England?*

The winds from the north, and the Arctic current which flows near the coast of Labrador, cause the climate to be too cold for agriculture. In the same latitude in England snow is seldom seen, owing to the nearness of the warm waters of the Gulf Stream, a branch of which flows into the Irish Sea, while the northeast current flows by the coast of Norway. The Gulf Stream renders the climate of Western Europe mild and moist.

106. *Why are the winters more mild at Puget Sound than in the region of Lake Superior?*

The Japan current, which passes our Pacific coast there, brings the warm waters of the torrid zone.

107. *Describe the Gulf Stream.*

It issues from the Gulf of Mexico, spreads out a breadth of 150 miles, and sweeps along the shore of North America to Newfoundland. Here it meets the Arctic current and divides into two branches, one of which takes a southeasterly course towards the coast of Africa, while the other flows in a northeasterly direction towards the British Isles and Norway.

108. *Where and what is the principal Sargasso Sea?*

It is a mass of floating seaweed, situated in the middle of the Atlantic Ocean, and occupying the eddy or whirl caused by the several ocean currents which surround it. There are smaller ones in the Atlantic and Pacific Oceans.

109. *What is the meaning of* sargasso?

It is a Spanish name, meaning grassy.

110. *What are the natural divisions of land?*

Continents, islands, peninsulas, isthmuses, capes, promontories, mountains, hills, plains and valleys.

111. *What are the natural divisions of water?*

Oceans, seas, gulfs or bays, straits, lakes and rivers.

112. *How are straits divided?*

Into straits proper, passages, sounds and channels.

113. *What is the size of the Eastern Continent compared with the Western?*

It is little more than twice as large. The Western Continent contains about 15,000,000 square miles.

114. *What is the area of the entire surface of the globe?*

About 200,000,000 square miles.

115. *Which of the grand divisions is the largest, which the smallest, which the most populous, and which the most fertile?*

Asia is the largest, Europe the smallest and most populous, and South America the most fertile.

116. *What are the political divisions of North America?*

The United States, Canada, Danish America, Mexico, Central America, and the West Indies.

117. *Of what races does the population of the United States consist?*

Caucasians, Negroes, Indians and Chinese.

118. *What is the number of the population of the United States?*

Nearly 70,000,000.

119. *What are the leading forms of industry of the people?*

Agriculture, manufacturing, mining and commerce.

120. *What are exports and imports?*

Exports are those commodities shipped out of the country, and imports those which come in.

121. *What are the leading exports and imports?*

The leading exports are cotton, breadstuffs, provisions, petroleum, tobacco, and many varieties of manufactured goods. The chief imports are dry goods, sugar, coffee, tea, hides, iron, tin and cutlery.

122. *With what countries does the United States have the greatest commerce?*

England, Germany, France, Canada, West Indies, Brazil, China, and Japan.

123. *What country contains the greatest number of inhabitants in proportion to its area?*

England with about 23,000,000 souls.

124. *How does England compare in area with the United States?*

It is about one-sixtieth as large, or about the size of Wisconsin.

125. *Which is larger, Europe or the United States?*

Europe is about one-tenth larger.

126. *How does Europe compare in size and population to Asia?*

Asia contains four times as many square miles and two and a-half times as many inhabitants.

127. *What is a frith, or estuary?*

A narrow arm of the sea into which a river empties.

128. *What is an archipelago?*

A sea interspersed with many islands.

129. *What is a delta?*

When a river discharges its waters by several outlets, the tract of land embraced by these outlets is called a *delta*.

130. *Why is this tract of land called a* delta?

From its resemblance to the fourth letter of the Greek alphabet, which is *delta*, shaped like a triangle.

131. *What is a road, or roadstead?*

A marine space some distance from the shore where vessels can anchor in safety.

132. *What is an oasis?*

A fertile spot in a desert.

133. *What is the valley or basin of a river?*

The tract of country drained by that river and its tributaries.

134. *What river of the world has the greatest basin, and what is the extent of this basin?*

The Amazon; it contains more than 2,275,000 square miles.

135. *What is the extent of the basin of the Mississippi?*

About 1,244,000 square miles.

136. *What is the extent of the basin of the* (a) *La Plata?* (b) *Nile?* (c) *Obi?* (d) *Yenisei?* (e) *Yang-tse-Kiang?* (f) *Niger?* (g) *Volga?* (h) *Ganges?* (i) *Mackenzie?* (j) *St. Lawrence?* (k) *Saskatchawan?* (l) *Orinoco?* (m) *Columbia?*

(*a*) 1,242,000; (*b*) 1,425,000; (*c*) 1,250,000; (*d*) 1,040,000; (*e*) 950,000; (*f*) 800,000; (*g*) 600,000; (*h*) 416,000; (*i*) 590,000; (*j*) 480,000; (*k*) 478,000; (*l*) 340,000; (*m*) 298,000.

137. *How wide is the mouth of the Amazon?*

One hundred and eighty miles.

138. *Into how many classes is mankind divided as regards social condition?*

Into four: the enlightened, the civilized, the half-civilized, and the savage.

139. *Which nations are enlightened, which civilized, and which half-civilized?*

Nearly all the people of Europe, of the United States and Canada, and of their respective colonies, are enlightened. The civilized people are nearly all those of South America, Mexico, China and Japan. The half-civilized people would embrace a large part of the people of Hindoostan, Indo-China, Turkey and Egypt.

140. *Who are barbarians, and who savages?*

Many of the tribes of Central Asia, the Barbary States, and the wandering tribes of Arabs are barbarians, a little raised above the savages, who are typified by the Indians of America, many of the negro tribes of Africa, and the Papuans of Oceanica.

141. *What class of men are called nomads, and why?*

The Arabs are called nomads because of their wandering nature, living in movable camps with no fixed location.

142. *What are the principal forms of government?*

Republican and monarchical.

143. *What is a republic, and what a monarchy?*

A country governed by men who are chosen by the people is called a republic. A monarchy is a government in which the chief power passes by inheritance, and the ruler holds his authority for life.

144. *Name the principal republics of the world.*

The United States, France, Switzerland, Mexico, Brazil, Venezuela, Colombia, Ecuador, Peru, Bolivia, Chili,

Argentina, Uruguay, Paraguay, Guatemala, Honduras, San Salvador, Nicaragua, Costa Rica, Hayti, San Domingo, the Transvaal, Orange Free State, Liberia, Andorra, San Marino, Montenegro, and Cuba.

145. *What is an unlimited, and what a limited monarchy?*

The will of the sovereign is the supreme law of an unlimited monarchy. A limited monarchy is one in which the will of the monarch is limited by a constitution.

146. *What kind of a monarchy is that of* (a) *Russia?* (b) *England?* (c) *Germany?* (d) *Turkey?* (e) *Spain?* (f) *China?*

(*a*) Unlimited; (*b*) limited; (*c*) limited; (*d*) unlimited; (*e*) limited; (*f*) unlimited.

147. *What is a constitution?*

The fundamental or organic law.

148. *What is the sovereign of an empire called?*

An emperor, sultan, shah, czar, khedive, or mikado.

149. *What are the political divisions of the earth?*

Empires, kingdoms, republics, states, counties, townships, and cities.

150. *Define each of these.*

An empire is a country governed by an emperor; a kingdom, one governed by a king; a republic, one governed by representatives chosen by the people; a state, a division of a republic or kingdom having laws of its own harmonizing with those of the general government; a county, a division of a state or kingdom; a city, a municipal or local organization for governmental purposes.

151. *What is the capital of a country? What is the metropolis?*

The capital is the seat of government. The metropolis is the largest city.

152. *How many distinct races of men are there?*

Five: Caucasian, Mongolian, American or Indian, African, and Malay.

153. *What is the estimated number of inhabitants of the earth? How divided?*

The estimated number is, in round numbers, 1,400,000,000. The Caucasian and Mongol races number more than four-fifths, the Ethiopian about one-seventh, the Malay about one twenty-fifth, the Indian about one one-hundredth.

154. *How many important systems of religion prevail?*

Seven: Christianity, Buddhism, Brahminism, Confucianism, Shintoism, Mohammedanism, and Judaism.

155. *What is the estimated popular strength of each system?*

The Christians about 400,000,000; the Buddhists, from 300,000,000 to 500,000,000; the Brahmins, 150,000,000; the Confucians, from 60,000,000 to 100,000,000; Shinto has from 12,000,000 to 20,000,000 followers; Mohammedanism, perhaps 200,000,000; Judaism, 7,000,000.

156. *Into how many great classes are Christians divided?*

Three: Roman Catholics, Greek Catholics and Protestants.

157. *What is the Mohammedan religion?*

The Mohammedans are followers of the prophet Mohammed, who lived in Arabia about six hundred years after Christ. They believe in one God; they consider Moses and Christ as true prophets, but Mohammed as the greatest and last. The Koran is the Mohammedan holy scripture.

158. *What are the principal points of faith of* (a) *the Buddhists,* (b) *the Brahmins,* (c) *the Confucians, and* (d) *the followers of Shinto?*

(*a*) The Buddhist religion was originated by Buddha in

the sixth century, B.C., and was characterized by admirable humanity and morality, with the idea that death was but a transitional stage of existence. Later the religion became mixed with an idolatrous worship of its founder and other supposed kindred beings.

(*b*) The Brahmins believe that Brahma was the creator of the world and that he was the first deity of a Hindoo triad. Their idols represent this union of three deities, and their worship is idolatrous.

(*c*) Confucianism is the system of morality taught by Confucius and his disciples, and forms the basis of Chinese jurisprudence and education. It can hardly be called a religion, as it does not inculcate the worship of any deity.

(*d*) The Shinto religion has been the chief religion of Japan, and includes the worship of ancestors and sacrifice to departed heroes.

159. *What is the principal difference between the Christian and Jewish religions?*

The Jews reject Jesus as a Saviour, and expect a Messiah yet to come. The Talmud is their bible.

160. *Who are termed pagans?*

Idolators and nature-worshippers. They comprise the greater part of the inhabitants of Asia and Africa, nearly all those of the islands of the Pacific, and the Indians of America.

161. *What are the longest four rivers in the world?*

The Mississippi with its chief tributary, the Missouri, has a length of 4,200 miles; the Nile is 4,000 miles long; the Amazon, 3,750; the Yenisei, 3,400.

162. *Name and give the length of the longest four rivers of North America.*

The Mississippi proper, 2,800 miles long; the Missouri,

2,900; the Mackenzie, 2,300; the Arkansas, 2,000; and the Saskatchawan, 1,900.

163. *What would be the length of the St. Lawrence through the chain of lakes to the head of the St. Louis River?*

About 2,000 miles.

164. *Give names and lengths of the longest four rivers of South America.*

The Amazon, 3,750 miles long; the La Plata, 2,300; the Orinoco, 1,550; the San Francisco, 1,550.

165. *Those of Europe.*

The Volga, 2,000 miles long; the Danube, 1,600; the Don, 1,000; and the Dnieper, 1,000.

166. *Of Asia.*

The Yenisei, 3,400 miles long; the Yang-tse-Kiang, 3,320; the Obi, 3,000; the Lena, 2,700.

167. *Of Africa.*

The Nile, 4,000 miles long; the Niger, 3,000; the Zambesi, 1,800; the Senegal, 1,200.

168. *What is noticeable of the Amazon River?*

The Amazon is a broad, deep river, and navigable for large vessels about 2,400 miles, and for steamboats to the foot of the Andes. The tide flows up 600 miles. The waters teem with alligators, and the banks are lined with almost impenetrable forests, filled with huge serpents and ferocious beasts of prey, troops of monkeys, swarms of insects, and flocks of gaudily-colored birds.

169. *Of the Mississippi?*

The Mississippi rises in Lake Itasca, and is navigable to the Falls of St. Anthony, which are very heavy rapids. The upper part of the river, in many places, has high and rugged banks, while in the lower part *levees* are built along the shores to prevent inundations. Its mouth is not

favorable for the navigation of large vessels. Instead of being broad and clear it has many outlets, and sand-bars are continually forming.

170. *Of the Missouri?*

This river is very rapid. It is much larger than the Mississippi in its upper part, and is navigable to the Great Falls above Fort Benton, Montana, where there are some grand cataracts.

171. *Of the Nile?*

The source of the Nile was not definitely known until recently, but through the explorations of Livingstone and Stanley it has been pretty well ascertained. At Khartoum, in the Soudan, the river divides, and these divisions are called respectively the Blue Nile and the White Nile. The Blue Nile rises in Abyssinia, and the White Nile, the real source of the river, in Lake Victoria Nyanza. The overflow of the Lower Nile from June to December is caused by the tropical rains in Abyssinia and those of the interior. The river gradually rises for three months and as slowly subsides, leaving a narrow stream for the remainder of the year. By this overflow the valley lands for an extent of from ten to twenty miles from the river bank become among the most fertile in the world. Above its mouth for nearly 1,500 miles no rivers or creeks flow into it.

172. *Describe the Rio de la Plata.*

The La Plata River is a great estuary 200 miles long, formed by the union of the Parana and Uruguay Rivers. For 1,000 miles on the Parana there is continuous and safe navigation for vessels of three hundred tons burden.

173. *Describe Egypt.*

Egypt is nearly as large as Texas; about three-fourths of its area consists of sandy deserts. The settled parts are principally in the valley of the Nile, which is from 10 to 20 miles wide. Egypt is noted for its ancient ruins. Its

pyramids, temples, sphinxes, statues, and the caves hewn in the rocks, are traces of its former civilization.

174. *By what two great commercial routes can we travel around the world, starting from New York?*

We can cross the Atlantic; enter the Mediterranean Sea; pass through the Suez Canal; sail down the Red Sea into the Indian Ocean; skirt the southern points of Asia to Canton; thence cross the Pacific to San Francisco; and thence cross the continent by rail to New York.

Or, we can sail southwest until nearly opposite Rio Janeiro; cross the Atlantic; round the Cape of Good Hope; sail through the Indian Ocean to the East Indies, and thence up the China Sea to Canton; cross the Pacific to San Francisco; sail thence to Panama and cross the Isthmus by rail; and sail thence north through the West Indies, to New York.

175. *What country has the most and the longest lines of railroad?*

The United States.

176. *Between what parallels does the United States lie, and how far are these parallels apart?*

Between the 26th and 49th. The distance from the southern point of Texas to the British possessions is about 1,600 miles.

177. *What is the longitude of San Francisco, and about how far is it from New York City?*

It is about 45° west from Washington, and about 3,000 miles from New York.

178. *What State is the geographical centre of the United States?*

Kansas, if we do not include Hawaii in the United States. It is also the centre of population.

179. *Which country produces the most cotton? Which the most sugar? Which the most coffee? Which the most rice? Which the most tea?*

Of cotton the United States produces most; of sugar, the West Indies; of coffee, Brazil; of rice and tea, China.

180. *What countries produce largely of the same products?*

Of cotton, the United States, South America and Egypt; of sugar, the United States and South America; of coffee, Java, the West Indies and the United States; of rice, the United States and Egypt.

181. *What country produces the most spices?*

The Spice Islands are celebrated for the production of cloves, nutmegs, and other spices. Java produces more pepper than all other countries combined.

182. *What are cloves, and how do they grow?*

The unexpanded clove flowers, dried. The clove tree grows to the height of from twenty to thirty feet.

183. *What are nutmegs?*

The fruit of the nutmeg tree. This tree is about the size of the common pear.

184. *What is a mountain system?*

Several ranges near each other and connected.

185. *Name the mountain systems of America.*

The Rocky, Californian, Alleghanian, Andean, Parime and Brazilian.

186. *What is the length of the longest day at the equator, at the Tropic of Cancer, on the Arctic Circle, and at the North Pole?*

At the equator the length of the days is always twelve hours; at the tropics the longest day is about thirteen and one-half hours; on the Polar Circles twenty-four hours; at the Poles six months.

187. *Why does so little rain fall in South America west of the Andes?*

Rains from the Pacific are of rare occurrence, and the height of the Andes shuts off the rain-clouds from the east.

188. *Which large city in Europe is noted for* (a) *the manufacture of cotton cloth?* (b) *Which for silks?* (c) *For linen?* (d) *For cutlery?* (e) *For laces?*

(*a*) Manchester; (*b*) Lyons; (*c*) Belfast; (*d*) Sheffield; (*e*) Brussels.

189. *What are the leading pursuits of the people of the New England States?*

Agriculture, manufacturing, lumbering and commerce.

190. *What are the products of the New England States?*

Grains, butter, cheese, wool, maple sugar, and live stock.

191. *Where are manufactures carried on to the greatest extent in these States? Name some of the most famous cities for the manufacture of cotton?*

The chief manufacturing centres are on the Merrimac and Pawtucket Rivers. Lowell, Lawrence, Fall River, Pawtucket and Woonsocket are noted for their cotton manufactures.

192. *What is remarkable about the Merrimac River?*

It is said to be more extensively used for manufacturing purposes than any other river in the world.

193. *What is said of the climate, soil, agricultural products, and commerce of New England?*

The winters are long and severe, and the summers short but hot. The soil is generally stony and not very fertile, except in the valleys. The agricultural products are not sufficient to supply the wants of the population. The many excellent harbors, the comparative nearness to Europe, and the abundance of ship timber have contributed to establish an extensive foreign commerce.

194. *How do the New England States compare in size with California?*

They are about two-fifths of California's size.

195. *What noted colleges are located at Cambridge and New Haven?*

Harvard at Cambridge and Yale at New Haven.

196. *What important industries are carried on at Lynn, New Bedford, Springfield, Worcester and Portland?*

Lynn is famous for its manufacture of boots and shoes, New Bedford for its whale fisheries and manufactories, Springfield for the greatest arsenal in the United States, Worcester as a railroad and manufacturing centre, Portland for the terminus of the Grand Trunk Railway of Canada.

197. *Where is Mount Washington, and what is its height?*

It is the highest peak of the White Mountains in New Hampshire, and is 6,288 feet high.

198. *Where is marble obtained?*

Chiefly from extensive quarries in Vermont and Italy. It is found also in Maine, Massachusetts, Rhode Island, Tennessee and Georgia.

199. *What is granite, and where is it found?*

It is a very hard rock, much used for millstones and solid architecture. It is found in the Eastern States.

200. *What State is called* (a) *the "Granite State"?* (b) *the "Pine-tree State"?* (c) *the "Green Mountain State"?* (d) *the "Bay State"?*

(*a*) New Hampshire; (*b*) Maine; (*c*) Vermont; (*d*) Massachusetts.

201. *For what are Lexington and Concord famous?*

For the opening engagements of the war of the Revolution, April 19, 1775.

202. *How many square miles in the area of Rhode Island, and how many States of the same size could be formed out of the State of Texas?*

Rhode Island contains 1,300 square miles. Texas would make 183 Rhode Islands.

203. *How does Maine compare in size with the other five New England States?*

It is nearly as large.

204. *What is particularly noticeable about the northern boundary of Connecticut?*

The boundary line, otherwise straight, swerves in order to take one township and part of another from the State of Connecticut and give them to Massachusetts.

205. *What is the size of California?*

About 189,000 square miles.

206. *What is the surface of this State?*

A large portion of it is traversed by mountain ranges. A great agricultural valley lies between the Sierra Nevada and the Coast Range, and extends 500 miles.

207. *What is the name of this valley, and from what did it derive its name?*

It is called the Sacramento and San Joaquin Valley, and derives its name from the Sacramento River, which rises in the northern part of the State, and the San Joaquin, which rises in the southern part. These rivers flow toward each other and empty into a branch of San Francisco Bay.

208. *What is the Golden Gate?*

A narrow strait about four miles long, which is the entrance from the Pacific Ocean to San Francisco Bay.

209. *What is the climate of the Pacific coast?*

It is mild and equable in temperature, but has great ex-

tremes of moisture. The seasons are termed the wet and the dry. About Puget Sound there is a greater rain-fall than in any other part of the United States, except Alaska.

210. *What natural curiosities do we find in California?*

The Big Trees and the Yosemite Valley are two of the chief wonders of nature. The Big Trees are gigantic evergreens, some more than one hundred feet in circumference, 400 feet high, and 3,000 years old. The Yosemite Valley is a remarkable chasm ten miles long and three wide, with perpendicular walls of granite from 3,000 to 5,000 feet high, over which the Merced River, in three leaps, falls more than 2,000 feet.

211. *What are the products of this section?*

Wheat, wool, lumber, salmon, gold, wine, and a great variety of fruits.

212. *What can be said of the fisheries of the Columbia River?*

They are an immense industry.

213. *What can be said of the valley of Puget Sound, and its climate?*

The Puget Sound country is very fertile and its climate mild, which is due to the warm ocean current flowing by its shores. The same latitude on the Atlantic is almost a cold, barren waste.

214. *Describe Alaska.*

It has an area of 577,000 square miles, or more than ten times that of Illinois. The climate is cold, and with the exception of the southern extremity it seems unfit for civilization. In the northern part the coast is low and marshy, while in the south it is mountainous. The Yukon and Pelly Rivers are remarkable for their breadth and length.

215. *What is its form of government?*

It is a Territory, but has no legislature and no representation in Congress.

216. *Is this possession valuable to the United States?*

Its value is already considerable, and may become very great, as the salmon fisheries are inexhaustible and mining is attracting much attention. The seal fisheries yield an annual revenue to the government, which has varied somewhat in recent years. Late discoveries of gold have added to its value.

217. *How are the seal fisheries conducted?*

A contract or license is granted to a company, who are allowed to kill so many seals each year and pay the government for this exclusive privilege.

218. *Which is the principal settlement, and what is its climatic peculiarity?*

Sitka. The rain-fall at this point is about seven and a half feet a year.

219. *When was gold discovered in California?*

It was first announced in February, 1848.

220. *What is the climate of California?*

There are two seasons, the wet and the dry. In the latitude of San Francisco the wet season lasts from the middle of November to the middle of May.

221. *What is the difference in latitude between San Francisco and Richmond?*

Richmond is about twenty-five miles south of the latitude of San Francisco.

222. *How far north of Richmond is New York City?*

About 230 miles.

223. *What part of South America is in the same latitude south of the equator, that the middle of the United States is north of it?*

The northern part of Patagonia.

224. *How does Brazil compare in size with the United States (not including Alaska or the Hawaiian Islands)?*

It is a little larger than the United States, containing about 3,230,000 square miles.

225. *What city of the West Indies is in the same latitude north of the equator that Rio Janeiro is south of it?*

Havaña.

226. *Describe South America.*

It is a vast peninsula, occupying the southern half of the Western Continent. Its length from north to south is about 4,000 miles, and its greatest breadth is about 3,000. Three great mountain systems diversify the surface, viz., the Andean, which stretches along the western coast; the Parime, which consists of several parallel ranges extending from east to west between the Orinoco and the Amazon Rivers; and the Brazilian system, which consists of two ranges running parallel to the coast of Brazil, with several diverging chains. Between these mountain systems extends a vast plain, which may be divided into four parts — the llanos, the selvas, the pampas, and the wastes of Patagonia.

227. *What are the llanos?*

Level grazing tracts which occupy most of the basin of the Orinoco. During the dry season they are parched and desolate, but with the return of rain rich pastures are abundant.

228. *What are the selvas?*

The forest plains of the Amazon, occupying the lower part of the basin and extending as far as the periodical inundation.

229. *What are the pampas?*

Tracts in Argentina, covered with a heavy growth of grass which affords sustenance to great herds of cattle and horses.

230. *What are the wastes of Patagonia?*

Sterile tracts covered with sand and gravel.

231. *What is a plateau, or tableland?*

An extensive flat tract considerably elevated above the level of the sea.

232. *How may the plateaus of South America be divided?*

The Great Plateau of the Andes; the elevated plains of Quito, Bogota, and Popayan; and the tableland of Brazil.

233. *Describe the plateau of the Andes.*

It is an extensive tract of lofty tableland, stretching along the tops of the Andes between parallels 3° and 15° south latitude, with an elevation of nearly 13,000 feet.

234. *Describe Quito.*

It is situated under the equator, on the side of a volcanic mountain, 9,500 feet above the sea. The climate is that of continuous spring. Earthquakes are frequent. Eleven summits of the Andes covered with perpetual snow are in sight of it.

235. *What are Chimborazo and Cotopaxi?*

Volcanoes of Ecuador. Chimborazo is a peak of the Andes range, 21,440 feet high. Cotopaxi, 18,900 feet high, is the most tremendous volcano in the world. The flame sometimes rises 3,000 feet above the top.

236. *What is the Peruvian balsa?*

A light raft, formed of inflated skins covered with a light platform. It is used for unloading vessels through the breakers, which continually dash upon the shores and prevent the approach of any ordinary boat.

237. *Describe the Cassiquiare River.*

It connects the Orinoco and Rio Negro Rivers. The tract of country through which it flows is so level that a rise or fall of the Orinoco governs the course of that river which flows during a portion of the year into the Amazon, and at other times in an opposite direction.

238. *How far north does South America extend?*

Twelve and a half degrees north of the equator.

239. *How may we divide the countries of South America?*

Into three divisions: Portuguese South America, Spanish South America, and the Guianas.

240. *What does Portuguese South America comprise?*

The Empire of Brazil.

241. *What do the Guianas comprise?*

The British, French and Dutch colonies.

242. *What does Spanish South America comprise?*

Nine independent republics, viz.: Venezuela, Colombia, Ecuador, Peru, Bolivia, Chili, Argentine Confederation, Uruguay and Paraguay.

243. *Why are these republics called the Spanish division?*

They were once colonies of Spain, and the Spanish language is spoken there.

244. *Describe these republics.*

Venezuela, the most northern country of South America, is tropical in climate, and exports coffee, cocoa and tropical fruits.

Colombia occupies the northwest part, embracing the Isthmus of Panama, and is the most important of the five northern republics.

Ecuador lies south of Colombia, and its exports are cocoa, coffee, India-rubber and Peruvian bark.

Peru lies south of Ecuador, and has more miles of railroad than any other country of South America. Its chief exports are guano and saltpetre. Silver mining is an important industry.

Bolivia has but little commerce; its people are not very energetic. Its exports are Peruvian bark, saltpetre and silver-ore.

Chili occupies a narrow strip of sea-coast extending from Peru to Cape Horn. It is the most enterprising country of South America, and a large proportion of its inhabitants are Europeans. Its chief exports are copper-ore, silver and wheat. The climate is semi-tropical in the northern part and extends into the cold, barren regions on the south.

Argentina, or the Argentine Confederation, stands next to Chili in enterprise. Its climate is semi-tropical, and its exports are hides, wool and flax. The country is little more than an extensive plain, with the finest grazing in the world. Large herds of cattle, horses and sheep are successfully handled here. Two-thirds of the hides are shipped to the United States. Education is rapidly advancing. The location of this country is in the southern hemisphere what that of the United States is in the northern.

Uruguay and Paraguay formerly belonged to the Argentine Confederation, but are now independent republics. Their exports and climate are similar to the Argentine Confederation. Paraguay is the weakest of the nine Spanish republics, and is the only other country of South America, excepting Bolivia, having no sea-coast.

245. *How many inhabitants has South America, and how are they divided in regard to race?*

South America has somewhat less than 30,000,000 inhabitants, of whom one-third are whites, one-third Indians, and the remainder Negroes and persons of mixed blood.

246. *What about local commerce and civilization?*

As South America is largely in the torrid zone, the climate

does not inspire activity, and commerce naturally drags; but as civilization advances, general prosperity increases. The whole continent is fast feeling the influence of the enlightenment of the United States and Europe.

247. *What are the natural resources and industries?*

There are no large gulfs or bays to indent the shores, and no great lakes, and hence small natural facilities for commerce. The opportunities for manufacturing, also, are far inferior to those of North America. The great central plain supports millions of cattle, horses and sheep. The industries mostly have to do with the products of tropical climates. Gold, silver, copper and diamonds are found and extensively mined.

248. *Which is the most important country for the commerce of the United States?*

Brazil.

249. *What can you say of the railroads of South America?*

They are short. Chili has the best system, and Brazil has about 2,000 miles.

250. *What part of South America is in the same latitude as Cape Colony?*

Uruguay.

251. *What city in Australia is in nearly the same latitude as Buenos Ayres?*

Sydney.

252. *What large city in the United States is in nearly the same longitude as Quito?*

Buffalo.

253. *What part of the western coast of Africa is in the same latitude as Cape Gallinas?*

Near Cape Verde.

254. *Where is Cape Horn?*

It projects from Horn Island, which is southwest from Hermit Island.

255. *What is Tierra del Fuego?*

The most southern part of the inhabited world, and is peopled by a race of savages who live chiefly by fishing.

256. *Whence did it derive its name?*

It was discovered by Magellan, in 1520, and named by him on account of the number of fires he saw along the coast, which he supposed to be eruptions of volcanoes. The meaning of Tierra del Fuego is "land of fire."

257. *Why was Patagonia so named?*

It was taken from the Spanish word *Patagon* — a man with large feet. Magellan gave the inhabitants of this country the name of Patagonians on account of their feet, which, being wrapped in skins, seemed much larger than they really were.

258. *Which cape in South America is the most northern, which the most southern?*

Cape Gallinas is farthest north, and Cape Horn farthest south.

259. *Which is the most eastern, and which the most western?*

Cape St. Roque is the most eastern, and Cape Parina the most western.

260. *Where is Lake Reys, and what river is its outlet?*

It is in Peru, and the Ucayle River is its outlet. This lake is the source of the Amazon.

261. *What is the general character of the lakes of South America?*

With the exception of Lake Titicaca and Lake Maracaibo, they are more like vast morasses than lakes.

262. *Describe Lakes Titicaca and Maracaibo.*

Lake Titicaca is a saltish lake, about half as large as Lake Erie, and is situated on the Great Plateau nearly 13,000 feet above the level of the Pacific Ocean. Its waters are inland, having no outlet to the ocean. Lake Maracaibo is, more properly speaking, a bay, being connected by a strait with the Caribbean Sea.

263. *Where are the Lobos and Chincha Islands?*

They lie off the coast of Peru.

264. *For what are they valuable?*

They are of great value for the immense quantities of guano found upon them.

265. *Which is the smallest division of South America, and what State is about the same size?*

French Guiana, which contains about 3,500 square miles, is about the size of Maine.

266. *How does Brazil compare in size to the whole of South America?*

It contains nearly one-half of the peninsula.

267. *Describe this country.*

It was once a colony of Portugal, and Portuguese is the language of the civilized inhabitants. An ocean telegraph connects Brazil with Portugal, and another with the United States by way of the West Indies. Brazil furnishes the greater part of the coffee used in the world, more than one-half of which comes to the United States. Cotton, sugar, hides, dye-woods, India-rubber and diamonds are also produced in large quantities.

268. *What important enterprise is being pushed on the Isthmus of Panama?*

A ship canal. It is understood that it shall not become a possession of any foreign government. With Colombia

we have a treaty of protection. The United States guarantees that no other power shall take possession of her lands or government.

269. *Who was Count Ferdinand de Lesseps?*

A great French engineer who built the Suez Canal, and who started the building of the canal on the Isthmus of Panama.

270. *Describe the Andes Mountains.*

They begin in low hills on the Isthmus of Panama, and end at Cape Horn in a bleak and naked rock rising 3,500 feet above the sea. In Patagonia they rise abruptly from the shore, but farther north they are from 60 to 100 miles from the coast. They consist generally of parallel ranges of lofty mountains, with high valleys and tablelands between. This system is from 30 to 400 miles wide.

271. *What does British America comprise?*

About one-third of the continent of North America, together with many adjacent islands. Its chief divisions are the Dominion of Canada, the Province of Newfoundland, the Bermuda Islands, the Bahamas, Jamaica and several colonies in the West Indies.

272. *What are the divisions of the Dominion of Canada?*

Quebec, Ontario, New Brunswick, Nova Scotia, British Columbia, Manitoba, and the Northwest Territories.

273. *What are the noteworthy characteristics of the Dominion as to climate, surface, trade, etc.?*

The climate is severe, except in the southern parts of British Columbia and Ontario. The surface as a whole is considered level. British Columbia and the provinces east of Manitoba are great forest regions. Between the Rocky Mountains and Manitoba are extensive prairies. Trade is principally with Great Britain and the United States. The exports are fish, coal, grain and lumber.

274. *How does the Dominion compare in size with the United States?*

Its population is 4,375,000 or only about $\frac{1}{15}$ that of the United States; and its area is 3,500,000, or about the same as that of the United States.

275. *What island forms a part of the province of Nova Scotia?*

Cape Breton.

276. *Describe Newfoundland.*

The surface is generally rocky and barren. The coast is indented by deep inlets, which form many excellent harbors. It is noted for its fisheries.

277. *Describe Nova Scotia, Prince Edward Island, New Brunswick; Quebec and Ontario.*

Nova Scotia has many good harbors and valuable fisheries; it is favorably located for commerce, and exports fish, sheep, coal and gypsum. Prince Edward Island has a fertile soil, and agriculture is the leading occupation of its inhabitants. New Brunswick is noted for its timber forests, and exports great quantities of lumber and fish. Quebec has a severe climate, and is noted for its picturesque scenery; Montreal, the largest city of this province, has an extensive commerce, and ships large quantities of grain. Ontario has a mild climate, compared with Quebec, and produces a great amount of grain and lumber.

278. *Describe Manitoba and British Columbia.*

Manitoba is in the basin of the great wheat-growing region of the North, and is rapidly increasing in population; the Red River of the North, flowing from the United States, and the Winnipeg Lake with the Saskatchawan River afford 2,000 miles of inland navigation. British Columbia abounds in salmon, timber, coal, gold and other metals.

279. *Describe the Northwest Territories.*

They are divided into Provisional Districts: Athabasca, Alberta, Saskatchawan and Assiniboia. They promise to become eventually the greatest wheat-producing country in the world.

280. *What is the government of the provinces of the Dominion?*

The chief executive officer is the Governor-General, who is appointed by the crown of Great Britain. The Legislature consists of two branches: the members of the lower branch being elected by the people, but the members of the other branch appointed by the Governor-General. Each province has a similar government under a Lieutenant-Governor.

281. *For what is the great Saskatchawan Valley noted, and how large is it?*

For the production of wheat; it contains more than 300,000 square miles.

282. *What is the Bras d'Or?*

It is an arm of the sea which almost divides the Island of Cape Breton.

283. *What French possessions are near these provinces?*

The small islands of St. Pierre and Miquelon. They lie south of Newfoundland, and serve as fishing-stations.

284. *What are the banks of Newfoundland?*

Shallow places in the sea, the largest being the Grand Bank, which lies to the eastward of the island. This bank is more than 600 miles long and 250 miles broad.

285. *Where is Anticosta Island?*

At the mouth of the St. Lawrence River. It is a barren island, occupied only by keepers of light-houses on the coast.

286. *Which of the United States is about the size of New Brunswick and Prince Edward Island respectively?*

South Carolina about equals New Brunswick, and Delaware Prince Edward Island.

287. *How is Montreal situated?*

On Montreal Island, 32 miles in length, and at the junction of the Ottawa with the St. Lawrence. The Isle of Jesus lies north of it.

288. *For what is the basin of the St. Lawrence remarkable?*

For the grandeur and beauty of its natural scenery. Niagara Falls, the Thousand Isles, the Rapids of the St. Lawrence, the falls near Quebec, and the grand scenery of the Saguenay River are the admiration of thousands of tourists.

289. *For what is the Bay of Fundy noted?*

For the highest tides in the world, which rise to the height of seventy feet.

290. *What are tides? Neap tides? Spring tides?*

Tides are elevations and depressions of the ocean at regular intervals, occurring twice in twenty-four hours. The neap tides are those with the least ebb and flow, and occur at the close of the first quarter and first of the last quarter of the moon. Spring tides have the greatest ebb and flow, and occur at the time of the new and the full moon.

291. *What are the chief causes of tides?*

The attraction of the moon and sun. Probably not one teacher in a thousand can explain this attraction to the satisfaction of his pupils. The fact that the water rises on opposite sides of the earth at the same time is the difficult part of the question.

292. *What are the three distinct movements of the ocean?*

Waves, tides and currents.

293. *What are waves?*

The action of the winds on the surface of a body of water. On the ocean, the height of waves produced by storms averages from 10 to 20 feet.

294. *What are ocean currents, and how are they caused?*

They are like vast rivers, transporting its waters from one part to another, and are caused by the heat of the sun, rotation of the earth, saltness of the sea, winds, tides, and melting ice.

295. *How are ocean currents divided?*

Into constant, periodical, and temporary.

296. *What is a counter current?*

A stream which runs by the side of, or beneath another current, and in an opposite direction.

297. *Why are the tides of Fundy Bay so much greater than elsewhere?*

The position of the bay is such that the Atlantic tide is forced into it, and the waters are raised by this pressure above the adjoining sea.

298. *What are the chief productions of the Canadian provinces?*

Grain, hemp, flax, potatoes, lumber, fish, coal, grindstones and gypsum.

299. *Name and locate the capital cities of these provinces.*

Halifax, N.S.; Frederickton, N.B.; Winnipeg, Man.; Regina, N.W.T.; Ottawa, Ont.; Victoria, B.C.; Quebec, Que.

300. *To what province does Labrador belong?*

Newfoundland.

301. *What are the obstructions to navigation from the Gulf of St. Lawrence to Lake Superior?*

The rapids of the St. Lawrence, Niagara Falls, and falls in the River St. Mary.

302. *How are these obstructions avoided?*

In ascending the river the rapids are avoided by canals on the left bank, but the downward passage, though perilous, is made by the river itself. The Welland Canal connects Lakes Ontario and Erie, thereby avoiding the Falls of Niagara. The falls of the St. Mary River are passed by a ship canal.

303. *How is Nova Scotia joined to New Brunswick?*

By an isthmus fourteen miles wide.

304. *What islands are in the Niagara River?*

Grand, Navy, and Goat.

305. *What difficulties of a political nature have of recent years arisen between Canada and the United States?*

The Canadians claim that American fishermen have invaded British waters.

306. *What are the commercial routes of the Dominion?*

The chief water route is the St. Lawrence River and the Great Lakes. The Grand Trunk and Canadian Pacific are the leading railroads.

307. *How is Oceanica divided?*

Into three divisions: Malasia, Australasia, and Polynesia.

308. *What does Malasia comprise?*

The East India Archipelago, which lies to the southeast of Asia. The principal divisions are the Sunda Isles, Spice Islands, Philippines, and Celebes.

309. *Which are the principal Sunda Isles?*

Borneo, Sumatra, and Java.

310. *What are the productions of these islands?*

No part of the world is richer in its vegetable products. The minerals are also valuable. Nearly all the spices that we use, such as cinnamon, cloves, nutmegs and pepper, are raised on these islands. Bread-fruit, sago, cocoanuts, bananas, yams, and various tropical fruits are grown extensively. Coffee is exported from Java; gold and diamonds from Borneo; tin from Banca; sugar, hemp and tobacco from the Philippine Islands.

311. *What is said of the animals of Malasia?*

They are among the largest and fiercest on earth. The tiger, rhinoceros, elephant and ourang-outang are found in Sumatra.

312. *What are the inhabitants?*

Principally Malays.

313. *What nations have possessions here?*

Java, the Spice Islands, Sumatra, Celebes, a part of Borneo, and most of Timor belong to the Dutch. The Philippine Islands belonged to Spain until the war of 1898 between that country and the United States. A part of both Borneo and Papua belongs to England; and part of Timor belongs to the Portuguese.

314. *Which are the most important cities of this archipelago?*

Batavia and Manila.

315. *How large is Borneo? Sumatra? Java? Celebes? The Philippine Isles?*

Borneo contains about 260,000 square miles, Sumatra 125,000, Java 52,000, Celebes 46,000, and the Philippines 66,000.

316. *Which State is about the size of Celebes?*

Pennsylvania.

317. *In which zone are these islands situated?*

The torrid. The equator crosses Sumatra, Borneo, Celebes, and some of the Spice Islands.

318. *What is the surface of these islands?*

Most of them are mountainous, and many contain active volcanoes; Java alone contains forty-three.

319. *Are these islands thickly inhabited?*

With the exception of Java, they are not. Java, which is about the size of Arkansas, contains 18,000,000 people.

320. *What does Australasia comprise?*

This is the largest division of Oceanica, and comprises Australia, Papua or New Guinea, Tasmania, New Zealand, New Caledonia, and many other islands.

321. *What race of people are called Papuans? Where are they found, and what is noticeable of them?*

They are a cannibal negro race and inhabit a long group of islands extending from New Guinea to New Caledonia.

322. *To what country do Australia, New Zealand, and Tasmania belong?*

To Great Britain.

323. *What possession has France in these divisions?*

New Caledonia.

324. *How is Australia divided?*

Into Western Australia, South Australia, Queen's Land, New South Wales and Victoria.

325. *How large is Australia?*

About four-fifths as large as the United States.

326. *What is the surface of this island?*

Near the coast are mountain ranges. The central regions have never been explored, but are supposed to con-

sist of a low, barren plain. The Murray is the only river of much importance.

327. *What are the inhabitants?*

The greater part of them are Europeans and their descendants. The natives are of the Papuan race.

328. *What are the chief pursuits of the people?*

Mining and raising wool. They also produce large amounts of wheat, indigo, cotton, sugar, coffee, tin and copper.

329. *What is the government of Australia?*

The colonies are politically independent of one another, and are governed by representatives chosen by universal suffrage, and by executive officers appointed by the British crown.

330. *What do you say of the climate and vegetation?*

The northern part is tropical, while the southern part is subjected to sudden successions of floods and droughts.

331. *How is Australia connected by telegraph with Europe?*

One line, from the principal cities, crosses the middle of the continent to the northwest coast, and is continued by ocean cable to British India, and thence through Asia and Europe. Other lines and cables connect directly with London.

332. *What may be said of the native animals of Australia?*

The largest is the kangaroo. The most singular one is the platypus, which has the body of an otter and the bill of a duck, and lays eggs.

333. *Which are the principal cities?*

Melbourne, Victoria; Sydney, New South Wales; Adelaide, South Australia; and Perth, West Australia.

334. *Is this country thickly settled?*

It is not. The estimated number of inhabitants is 2,000,000.

335. *Describe Tasmania.*

It is about one-half as large as England, and is a fine agricultural island, inhabited solely by European colonists.

336. *Where is New Zealand?*

Southeast of Asia. The surface is mountainous, and the inhabitants belong to the Malay race.

337. *What is said of Papua and the other islands?*

They are but little known. There are no considerable white settlements in any of them except New Caledonia.

338. *What does Polynesia include?*

A multitude of islands scattered through the Pacific Ocean.

339. *Name the principal groups.*

The Sandwich, Society, Friendly, Marquesas, Caroline and Ladrone Islands.

340. *What is the surface of the islands of Polynesia?*

There are either mountainous, principally of volcanic formation, or low islands, which are the work of the coral animal.

341. *What are the native inhabitants?*

Mostly of the Malay race.

342. *What may be said of the animals?*

When first discovered, these islands contained neither insects nor reptiles, and no animal larger than a hog.

343. *Which is the only important town in Polynesia?*

Honolulu, on Oahu, one of the Sandwich (or Hawaiian) Islands.

344. *Name the Middle States, and tell how they compare in size to the New England States.*

New York, Pennsylvania, New Jersey and Delaware; they are about twice as large as New England.

345. *Which is the larger, New York or Pennsylvania?*

New York contains 47,000 square miles, and Pennsylvania 46,000.

346. *What is the surface of these States?*

New York is somewhat undulating; it contains the Catskill and the Adirondack Mountains. Pennsylvania is rather mountainous; the Alleghany system attains its greatest breadth here. The greater part of New Jersey, Delaware and Maryland is low and generally sandy.

347. *What can be said of New York?*

In wealth, population, and commercial importance, it holds the first rank in the Union.

348. *For what are Rochester, Syracuse, West Point, and Saratoga noted?*

Rochester has the most extensive flour-mills in the East, and Syracuse the greatest salt-works in the country. West Point is the seat of the United States Military Academy, and Saratoga is well known as a fashionable watering-place.

349. *For what is Pennsylvania noted?*

It is one of the richest States in the Union. Much of its wealth lies in mining and manufacturing, but it is also rich in grain and live stock.

350. *What may be said of its minerals?*

The mines of iron and coal far surpass those of any other State. Petroleum in large quantities is found in the north-western part.

351. *For what are Pittsburg and Philadelphia noted?*

Pittsburg is the greatest iron manufacturing city, and Philadelphia is the second greatest manufacturing city in the Union.

352. *Where is Fairmount Park, and what great event occurred there in recent years?*

It is in Philadelphia, and the great world's fair of 1876, called the Centennial Exposition, was held there.

353. *What is the estimated population of the City of New York?*

It is estimated at about 3,500,000.

354. *Describe the Brooklyn Bridge.*

See answer No. 651 on United States History.

355. *What gift of the French people is in New York harbor?*

The Statue of Liberty Enlightening the World.

356. *What are the pursuits of the people of New Jersey?*

Chiefly agricultural. They supply the vegetable markets of New York and Philadelphia.

357. *What noted resorts for sea-bathing are in this State?*

Long Branch, Asbury Park, Cape May and Atlantic City.

358. *How large is Delaware?*

With the exception of Rhode Island, it is the smallest State in the Union; contains only 2,120 square miles.

359. *Describe the District of Columbia?*

It is situated on the Potomac River, and has an area of sixty square miles. It contains Washington and Georgetown. It is under the government of Congress.

360. *How great a fall has the cataract of Niagara?*

One hundred and sixty-five feet.

361. *How are the West Indies divided?*

Into the Greater Antilles, the Lesser Antilles, and the Bahamas.

362. *What islands belong to the Greater Antilles?*

Cuba, Hayti, Jamaica, and Porto Rico.

363. *What do the Lesser Antilles include?*

The chain of islands extending from Porto Rico to South America.

364. *What and where are the Bahama Islands?*

They are low islands of coral formation, and lie north of the Greater Antilles.

365. *To what country do these islands belong?*

Cuba and Porto Rico lately belonged to Spain, but Cuba is now free, and Porto Rico has come into possession of the United States, owing to the Spanish-American war of 1898; Jamaica, the Bahamas, and most of the Lesser Antilles belong to Great Britain; Hayti is independent; and the remaining islands are owned by France, Denmark, Holland and Venezuela.

366. *What are the inhabitants of these islands?*

Principally whites, and free negroes, with some Chinese. About one-sixth are whites.

367. *What is the surface of the Antilles?*

Mountainous. The mountains are supposed to be the remains of a chain which at some remote period connected North and South America.

368. *What are the productions?*

Tropical fruits, sugar, coffee, tobacco, rum, mahogany and spices.

369. *What is rum?*

Spirits distilled from molasses.

370. *How is the island of Hayti divided?*

Between two republics, Santo Domingo and Hayti.

371. *What is the history of this island?*

It once belonged to France and Spain. In 1791 the slaves in the western, or French division, rose against their masters, and after a bloody war succeeded in establishing an empire, which presently became a republic. In 1849, the President (Soulouque) proclaimed himself emperor, with the title of Faustin I. After a reign of ten years he was deposed, and a republican form of government was again adopted. In 1821 the eastern division revolted from Spain and became a republic.

372. *Where are the Bermuda Islands, and to whom do they belong?*

They are east of the United States and belong to Great Britain. There are about 400 of these islands, but most of them are so small and barren that they have neither name nor inhabitants.

373. *How large are Cuba and Hayti?*

Cuba is about the size of Pennsylvania, and Hayti is about half as large as Michigan, containing 28,000 square miles.

374. *What are keys?*

Small rocky islands of coral formation.

375. *What is a reef?*

A chain of rocks lying near the surface of the water.

376. *Describe the southern coast of Florida.*

It is fringed with reefs, and, as many of the rocks are just below the surface of the water, they are dangerous to navigation.

377. *Where is Key West, and what are its exports?*

It is the most southerly town in the United States proper,

on an island of coral formation southwest of the mainland of Florida. Its exports are salt and sponge.

378. *How is salt made in Key West?*

By solar evaporation.

379. *What is sponge?*

A soft porous growth, which is found attached to rocks below the surface of the water.

380. *What is the general surface of Florida?*

Level. In the south, dense marshy thickets called everglades cover the surface and are of 160 by about 60 miles in area.

381. *What are the products of this State?*

Cotton, corn, sugar-cane, rice, and tobacco. Tropical fruits, such as oranges, lemons, figs, pomegranates, pine-apples, olives, etc., are abundant.

382. *What is Lake Okeechobee, and where is it?*

It is a great swamp connected with the everglades, near the southern part of Florida.

383. *What scheme is proposed by civil engineers in regard to this swamp?*

They propose that capitalists shall drain these lands by a system of canals. As the lands when drained will be unsurpassed in fertility, it is reasonable to suppose that eventually this will be done.

384. *Why has Florida so few good harbors?*

On account of the many reefs or keys which skirt the shores, and the lowness of the land as it approaches the sea.

385. *Which State is split by the Mississippi River?*

Louisiana. About one-fifth of the State is on the east side of the river.

386. *On which side of the river is New Orleans? Describe it.*

On the east side, about 100 miles from the mouth. It is the greatest cotton mart in the world, and is built around a bend in the river, whence it is called the Crescent City. The foundation is artificial, as it was built on a swamp. It lies below the level of the river, but is protected by the levee, which at this place is a continuous quay, four miles long and 100 feet wide.

387. *What is the soil of Louisiana?*

It is varied. The richest tract is a belt of land from one to two miles wide, on both sides of the river, extending from 150 miles above to 100 miles below New Orleans. This tract is annually inundated by the spring floods. Only a small part of the State is under cultivation.

388. *How many Territories are there in the United States?*

Three organized, and two unorganized. Arizona, New Mexico and Oklahoma are organized. Indian Territory and Alaska are not. Hawaii and Porto Rico are annexed territories.

389. *What does Danish America include?*

Greenland and Iceland.

390. *Has Greenland been fully explored?*

It has not. The interior and northern parts are unknown, and it is supposed by some that the island is only a projection of an Arctic continent not yet discovered.

391. *Why was Greenland so named?*

It was named by an Icelandic chief, who, for some crime, was obliged to flee from his native land. To induce his countrymen to follow him, he falsely represented his new home to be superior in fertility to Iceland.

392. *Describe Iceland.*

It is of volcanic formation. Ranges of high, rugged mountains border the coast, while the interior is a dreary of desert volcanoes, ice-clad mountains, or fields of lava.

393. *What natural curiosities are here?*

The geysers, or boiling springs. About fifty of these hot springs occupy an area not exceeding twelve acres. Some throw up water, and even large stones, to a great height.

394. *What is supposed to be the cause of this phenomenon?*

Nearness to Mount Hecla, which is only thirty-five miles distant, or a volcanic commotion beneath the springs themselves.

395. *What gave its name to Iceland?*

It was named by a Norwegian pirate who, on his first visit, saw a bay filled with ice, which had floated thither from Greenland.

396. *Which are the principal towns of Danish America?*

Lichtenfels and Reikiavik.

397. *How much larger is Asia than Africa?*

About 4,000,000 square miles.

398. *What is the greatest length and breadth of Africa?*

From north to south it measures about 5,000 miles; its greatest breadth is about 4,800 miles.

399. *Give a short description of Africa.*

Large parts of it have not been fully explored. The shores are not indented by deep gulfs or inlets, which is one of the principal reasons why the interior is so little known. The surface is varied. There are mountain systems, sandy deserts and elevated plateaus. The greater part is in the torrid zone, and, much of the country being

desert land, it is, as a whole, the hottest and driest grand division of the globe.

400. *What are the inhabitants?*

Except the northern part and some settlements on the coast, the inhabitants are negro tribes, whose religion is paganism and their condition barbarous.

401. *What are the chief countries of Barbary?*

Morocco, Algiers, Tunis and Tripoli.

402. *To what nations do they belong?*

Morocco is an independent empire. Algiers is a colony of France. Tunis and Tripoli are dependencies of Turkey.

403. *How large is the Desert of Sahara?*

From 750 to 1,200 miles wide, and 3,000 long.

404. *Describe the Soudan, its exports, and how its commerce is carried on.*

It occupies a large part of Central Africa, extending across the continent south of the Great Desert. The soil is fertile, and the climate tropical and similar to the Amazon Valley. It contains a number of semi-barbarous states of large population. The religion is chiefly Mohammedan, although a great many tribes of negroes are pagans and combine with their religion a belief in evil spirits, witchcraft and magic charms, known as fetichism. The exports are gold, ivory, ostrich feathers and gum arabic. Commerce is carried on by caravans.

405. *How is Southern Africa divided?*

Cape Colony, Natal, Zululand, the Transvaal, Orange Free State, Bechuna, Namaqua, Damara and Rhodesia.

406. *How are these countries governed?*

Cape Colony, Zululand, Rhodesia and Natal are British colonies. The others are independent.

407. *Where and what is Liberia?*

It is on the western coast of Africa, and is a negro republic, with a government modeled after that of the United States. The republic was founded in 1821 by the American Colonization Society, as a place of refuge for free blacks and liberated slaves from the United States.

408. *Where is the colony of Sierra Leone?*

Above Liberia. It was founded for the same purpose in 1787, by the British government.

409. *What are the principal exports of Africa?*

They differ in different parts. The southern part exports corn, wine, wool, hides, horns, ivory, gold and diamonds; the western, ebony, palm oil, gold dust, and ostrich feathers; the northern, fruits, wool, hides, gums, indigo, salt, leather, cotton, rice, opium, coffee, and many other articles.

410. *Describe Madagascar.*

It is the largest of the African islands, containing 240,000 square miles. It is mountainous and but little known. Part of the inhabitants belong to the African and part to the Malay race.

411. *What city is the largest in Africa? The second in size?*

Cairo is the largest and Alexandria the second.

412. *Where are Port Said and Suez?*

At the two ends of the Suez Canal.

413. *How long is the Suez Canal, and to what nation does it belong?*

It is 65 miles long and belongs virtually to England and France.

414. *Locate the capital cities of the Territories of the United States.*

Santa Fé, New Mexico; Phœnix, Arizona; Tahlequah, Indian Territory; Guthrie, Oklahoma; and Sitka, Alaska.

415. *For what are Idaho and Montana noted?*

For their rich gold and silver mines, and their natural advantages for grazing and stock-raising.

416. *Where is Yellowstone Park?*

In the northwest corner of Wyoming. It contains 3,600 square miles. It contains many deep canyons, lofty falls, bathing pools, geysers, lakes, and other natural beauties and wonders. It has been set aside by Congress as a "perpetual reservation for the benefit and instruction of mankind."

417. *Describe North and South Dakota.*

They are less mountainous than Idaho or Montana. Much of their surface consists of rolling prairie land, well watered, and especially adapted for farming and cattle-raising.

418. *Describe the Union Pacific Railroad.*

It is a great transcontinental route, lying west of the Missouri River. It passes through the southern part of Nebraska, up the valley of the Platte River, touching the northern boundary line of Colorado and the southern part of Wyoming, through Northern Utah and Nevada, and thus to California.

419. *Name the principal towns on this railroad.*

Omaha, Fremont, Columbus, Kearney, Julesburg, Cheyenne, Laramie and Ogden.

420. *How is Salt Lake City situated?*

It is on the Jordan River, near Great Salt Lake, south of the Union Pacific Railroad, and on a branch line.

421. *Describe Utah.*

It contains the Great Salt Lake and the eastern part of the great arid basin, which is the most desolate region in the United States. Rain seldom falls in this basin, but some tracts near the rivers and lakes have been made fertile by irrigation. Gold, silver, iron, salt, coal and other minerals are plentiful there.

422. *What people settled Utah?*

The Mormons, or Latter-day Saints.

423. *For what are the Southwestern States and Texas especially adapted?*

For grazing and grain-growing.

424. *How are parts of Western Texas occupied?*

By herds of wild horses.

425. *What are the productions of Texas?*

Cotton, corn, sugar, tobacco, rice, and some semi-tropical fruits.

426. *What is the climate?*

A great part of the State is much elevated, and therefore free from extremes of heat and cold. Snow is seldom seen, but from October to March violent winds called "northers" sweep over the prairies of Texas, and plains of Mexico.

427. *Which of the States border on Canada?*

Maine, New Hampshire, Vermont, New York, Michigan, Minnesota, North Dakota, Montana, Idaho, Washington.

428. *Which of the States are separated by the Mississippi River?*

Wisconsin, Illinois, Kentucky, Tennessee and Mississippi on the east shore are separated from Minnesota, Iowa, Missouri, Arkansas and most of Louisiana on the west.

429. *Which are separated by the Ohio River?*

Ohio, Indiana and Illinois, from Kentucky and West Virginia.

430. *What is the general outline of Europe, and what advantages does it offer?*

It is more irregular than that of any other division of the earth. Large seas and gulfs penetrate far into the interior, affording unequalled advantages for commercial intercourse.

431. *What is the surface?*

It is divided into extensive plains and mountain systems. Southern Europe is crossed from west to east by a great mountain system, which is continued through Asia to the Pacific Ocean. Northward from this system extends a great plain, which stretches from the Atlantic to the Pacific.

432. *What are the principal European parts of this great mountain system?*

Caucasus, Balkan, Alps, Cevennes, Pyrenees, and Cantabrian.

433. *What part of Europe is included in the Great Plain?*

Russia, Northern Germany, Denmark, Holland, Belgium, and a part of France.

434. *What is the climate?*

It varies in the same latitude. In Eastern Europe the winters are excessively cold, while the summers are very hot. On the shores of the Atlantic the warm ocean current renders the climate mild and moist.

435. *Name the political divisions.*

Russia, Austria, Germany and Turkey are empires; Great Britain, Norway and Sweden, Denmark, Holland, Belgium, Spain, Portugal, Italy and Greece are kingdoms;

France and Switzerland, with Andorra and San Marino, are republics.

436. *Which divisions are called the "Five Great Powers"?*

Great Britain, Russia, Germany, France and Austria.

437. *Name the peninsulas of Europe.*

The Scandinavian, Jutland, Iberian, Italian, Morea and Crimea.

438. *Describe the Scandinavian peninsula.*

It comprises Sweden and Norway, two distinct States with separate governments, but united under one king. Nearly the whole of Norway and the eastern part of Sweden are mountainous. The southeastern part of Sweden is a level plain.

439. *What are the exports of this peninsula?*

Iron, copper, lumber and fish.

440. *How much farther north can grain be raised in Norway than on the Atlantic shore of America?*

Rye, oats and barley can be raised 1,400 miles farther north.

441. *What point on the western hemisphere is in the same latitude as Christiania?*

The southern point of Greenland.

442. *Where is Lapland?*

In Europe north of the Arctic Circle, and between the White Sea and Atlantic Ocean. It belongs to Russia, Sweden and Norway.

443. *Is this country inhabited?*

It is, by a Mongolian tribe called Laplanders. They own herds of reindeer, which supply them with food, clothing and means of traveling.

444. *What is the size of the Russian Empire?*

It is next to the largest in the world, comprising fully one-half of Europe and more than one-third of Asia. The entire area is about 8,000,000 square miles.

445. *What is the surface of this empire?*

For the most part it is very level. The only mountainous section in European Russia is between the Azov and Caspian Seas.

446. *How are the inhabitants divided?*

Into four classes: the nobles, the clergy, the merchants, and the lately emancipated serfs.

447. *What are the government and religion?*

The government is an absolute monarchy. The greater part of the inhabitants belong to the Greek Church.

448. *What are the inhabitants called, and what is the title of their monarch?*

The inhabitants are called Sclavs, and their monarch the Czar.

449. *What subject is strongly agitating the minds of the Russian people?*

The question of a constitution which will change the government to a limited monarchy.

450. *Who are the Nihilists?*

They are revolutionists who seek the overthrow of the empire and resort to secret violence to accomplish their cause.

451. *What political relations, of a strained character, exist between Russia and England?*

England is fearful of the Russian advances in Asia, and jealously watches every movement.

452. *In what does the principal wealth of Russia consist?*

In its forests, covering two-fifths of the country, and the products of agriculture and grazing.

453. *Where are the great wheat-growing regions of Europe?*

In Central and Southern Russia.

454. *What is the nature of the country around the Caspian Sea?*

It is mostly sterile, and has the appearance of having been subjected to volcanic fires. There are many salt lakes and fire-hills.

455. *Describe the Caspian Sea.*

It is an inland sea, containing 140,000 square miles, and below the level of the Mediterranean. Several large rivers flow into it, but there is no visible outlet.

456. *What are steppes, and where are they found?*

Large, barren plains in Southeastern Russia.

457. *Where are Poland and Circassia?*

Poland is that part of Russia lying north of Austria. Circassia is the region of the Caucasus Mountains.

458. *Where is Moscow, and when was it burned?*

It is near Central Russia, on a branch of the Oka River. It is a railroad centre, and one of the principal cities for trade. It was burned by the Russians during Napoleon's invasion of 1812, to deprive his troops of their expected winter quarters. This great sacrifice of the Russians saved their empire, by compelling Napoleon to withdraw from the country.

459. *For what is Sebastopol famous?*

For a siege which it sustained for one year, against the combined English, French, Turkish and Sardinian armies.

460. *What was the cause of this siege?*

Sebastopol was one of the strongest Russian fortifications, and a perpetual menace to Turkey; its destruction ended the Crimean war.

461. *Who inhabit the steppes of Russia?*

The Cossacks, who are of great service to the Russian army as light cavalry.

462. *What takes place at Niznei Novgorod every year?*

A great fair is held there, which is attended by thousands of people who come from different parts of Europe and Asia to buy and sell goods.

463. *Which are the principal ports for foreign commerce?*

St. Petersburg, Cronstadt, Riga, Archangel, and Odessa.

464. *What seas and gulfs wash the shores of Russia?*

The Caspian, Azov, Black, Baltic, White and Kara Seas, and the Gulfs of Riga, Finland, Bothnia, Onega and Petchora.

465. *What do the British Isles comprise?*

Great Britain, Ireland, and many small adjacent islands.

466. *What does Great Britain include?*

England, Scotland and Wales.

467. *What is the surface of the British Isles?*

England and Ireland are generally level or undulating; Scotland and Wales are rugged and mountainous.

468. *How is Scotland divided?*

Into the Highlands and Lowlands. The Highlands lie north, and the Lowlands south, of the Grampian Hills.

469. *What is the nature of the sea-coast?*

It is very irregular, and abounds in fine harbors and roadsteads.

470. *What is the climate?*

It is moist and mild. The winters, even of Scotland, are rarely severe. The moisture of the climate and the low temperature in summer sometimes prevent crops from maturing. Corn will not ripen.

471. *In what does the chief wealth of Great Britain consist?*

In her commerce, manufactures and mining.

472. *How does she rank with other nations in the amount of her manufactures and commerce?*

She surpasses every other country in the world. The principal manufactures are those of cotton, wool and iron.

473. *What of her merchant marine and navy?*

There are 25,000 British merchant vessels and more than 200,000 seamen. The British navy is regarded as the strongest in the world, although the Russian is hardly inferior. Germany, France and Italy also have powerful navies.

474. *What effect do the great armies of Europe have upon popular sentiment there?*

Besides immense standing armies, the European countries hold in reserve millions of citizens subject to call. The result of such enormous defense is a distressing taxation and popular discontent. No country can stand forever such a terrible drain on the resources of the people.

475. *What is the government of Great Britain? What is Parliament?*

The government is a constitutional monarchy. The Legislature, or Parliament, has two branches, the House of Lords and the House of Commons. The members of the House of Commons are elected by the people.

476. *Who is the Prime Minister?*

The executive power and the entire responsibility of the government are in the hands of the Ministry, who are appointed by the sovereign and selected from the Commons. The Prime Minister is practically the real ruler of the empire; if opposed by a majority of the House of Commons, he resigns, and the sovereign appoints his successor.

477. *Where is tin obtained?*

Principally from Cornwall, England, and the Island of Banca. The mines of Cornwall have been famous from remote antiquity.

478. *What is the chief article of fuel in Ireland?*

Peat, or bog turf, of which there are more than 3,000,000 acres.

479. *What is the extent of the British Empire?*

It has colonies in every quarter of the globe, and unites under one sovereign a greater number of people than are ruled by any other government.

480. *Which are the principal possessions of Great Britain in Continental Europe?*

Gibraltar in Spain, and the Islands of Malta and Gozo.

481. *Which in Asia?*

British India, including Ceylon, Hindoostan, a part of Farther India, and Singapore; the Island of Hong Kong, and the City of Aden.

482. *In Africa?*

Sierra Leone and other settlements on the western coast; Cape Colony, Zululand, Rhodesia, and Natal; the Islands of Sychelle, Mauritius, Ascension, and St. Helena.

483. *In Oceanica?*

Australia, Tasmania, New Zealand, Norfolk, Labuan, and a part of Borneo.

484. *In America?*

British America, Bermuda Islands, Balize, Jamaica, Bahama Islands, and many of the Lesser Antilles, British Guiana, and the Falkland Islands.

485. *For what are Liverpool, Leeds and Bradford, Birmingham, Limerick, and Merthyr Tydvil noted?*

Liverpool, for its great commerce. Leeds and Bradford, for their manufactures of wool. Birmingham, for hardware. Limerick, for the manufacture of gloves, laces and fish-hooks. Merthyr Tydvil, for its iron-works.

486. *How large an area is covered by the City of London?*

About 122 square miles.

487. *What questions agitate the people of Ireland?*

The questions of home rule and peasant proprietorship of the land.

488. *Describe the Spanish Peninsula.*

It is the principal plateau of Europe, the whole central part consisting of a series of lofty plains, divided from each other by parallel mountain chains. This plateau comprises 93,000 square miles, or nearly one-half of the peninsula.

489. *What are the productions of Spain?*

The vine, olive, mulberry, and orange. Large flocks of sheep are raised on the tablelands of the interior.

490. *What parallel crosses the central part of Spain, and through which of the United States does the same parallel pass?*

The 40th parallel. It passes through New Jersey,

Pennsylvania, Ohio, Indiana, Illinois, Missouri, Nebraska, Kansas, Colorado, Utah, Nevada and California.

491. *What other countries in Europe does the same parallel cross?*

Portugal, Italy and Turkey.

492. *Were we to follow this parallel, what countries in Asia should we pass through?*

Turkey, Turkestan, China and Japan.

493. *Where is the Republic of Andorra?*

In the Pyrenees between France and Spain.

494. *What is noticeable of this republic?*

The population is only 5,000 or 6,000, but the country has been independent for more than a thousand years.

495. *What are the foreign possessions of Spain and Portugal?*

The Ladrone and Canary Islands belong to Spain. The possessions of Portugal are the Azores, the Cape Verde and the Madeira Islands, and Lower Guinea, in Africa.

496. *How wide is the Strait of Gibraltar?*

Twelve miles in its narrowest place.

497. *What may be said of the fortress of Gibraltar?*

It is situated on a mountainous promontory, and is the strongest fortification in the world.

498. *How large is France?*

It contains 204,000 square miles.

499. *How does France rank with other countries?*

As one of the richest and most powerful. The position of the country and the fertility of the soil give it great commercial and agricultural advantages.

500. *What is the surface?*

The eastern part is mountainous, while the rest belongs to the great plain, which extends across the continent.

501. *What and where are the landes?*

They are plains of shifting sands in the southwestern part of France.

502. *What are the principal exports?*

France exports more wine, brandy, and silk goods than any other country.

503. *What influence has Paris throughout the civilized world?*

The influence of fashion.

504. *Name the principal possessions of France.*

Algeria, Senegal, Pondicherry, Isle of Bourbon, New Caledonia, Marquesas Islands, French Guiana, St. Pierre and Miquelon, Martinique, Guadaloupe, and Corsica.

505. *What are the pursuits of the people of Holland and Belgium? What is Holland properly called?*

In Holland, stock-raising and dairying are the chief pursuits. Belgium is an agricultural and manufacturing country; it also has extensive mines of coal and iron. Holland is properly called the Netherlands.

506. *What is the condition of much of the coast of this country?*

It is so low that in many places dykes, or embankments, are necessary to prevent inundations.

507. *How is internal communication promoted?*

By canals. In Holland especially, canals run through the principal streets of the towns, and form a complete network over the country.

508. *What is the Zuyder Zee?*

An arm of the sea, or gulf, which indents the northern part of Holland.

509. *What people are Dutch?*

The people of Holland.

510. *What are the colonial possessions of the Netherlands?*

Next to those of Great Britain they are the most extensive and valuable in the world. They include the most important parts of the East Indian Archipelago, Dutch Guiana, and several islands in the West Indies.

511. *What are the occupations of the people, their commerce, manufactures, etc.?*

Agriculture is the principal occupation in the Netherlands, and manufacturing and mining in Belgium. Their foreign commerce is among the largest in the world, their exports including fine manufactured goods of silk, cotton, wool, linen, leather and iron. Lace-making is an important industry.

512. *What is the surface of Denmark?*

It is nearly flat; some parts are below the surface of the sea, from which they are defended by dykes.

513. *How is Copenhagen situated?*

On the eastern coast of the Island of Zealand, and partly on the adjacent Island of Amok. Many of the buildings are built on piles in the water.

514. *What are the colonial possessions of Denmark?*

Greenland, Iceland, Faroe Islands, and several small islands in the West Indies.

515. *What does the German Empire comprise?*

The kingdoms of Prussia, Bavaria, Wurtemberg and Saxony, six grand-duchies, five duchies, seven principali-

ties, three free cities, and the state of Elsass called by the French Alsace.

516. *Which are the free cities?*

Hamburg, Bremen and Lübeck.

517. *Where is the state of Alsace?*

On the Rhine. It was a part of France, till the Franco-Prussian war of 1870-71.

518. *What are the capitals of the four kingdoms?*

Prussia has Berlin for its capital; Saxony, Dresden; Bavaria, Munich; Wurtemberg, Stuttgart.

519. *Describe the government of Germany.*

It is a limited monarchy, with the King of Prussia as German Emperor. The imperial legislature consists of two bodies: the Federal Council, somewhat resembling the English House of Lords, and the Reichstag, whose members are elected like the members of the House of Commons.

520. *What can be said of its military power?*

It is generally considered the strongest in the world, and the government is continually strengthening it.

521. *What of its school system and its manufactures?*

Prussia has the most complete and comprehensive system of public schools of any nation, and the general education of the whole empire is remarkably good. The manufactures are varied and extensive, and the exports include wheat, wine, zinc, and almost every description of manufactured goods.

522. *Which are the chief ports of Germany?*

Hamburg and Bremen.

523. *What are the agricultural productions?*

Nearly the whole of Germany is under cultivation, and

large crops of wheat, rye, barley, oats, tobacco, beet-root and linseed are produced.

524. *What are heaths?*

Sandy tracts in Northern Germany and Denmark.

525. *What are the inhabitants of Austria?*

They are of different races, but mostly Germans, Hungarians, Italians and Poles.

526. *What is the proper title of Austria?*

The Austro-Hungarian Empire.

527. *How is this empire divided?*

It is divided into two distinct and nearly independent groups of provinces. Each group has a government of its own, but the whole is under one general government. The Kingdom of Hungary and its dependencies constitute nearly one-half of the empire. The Emperor of Austria is King of Hungary.

528. *What are the chief exports of Austria?*

Wheat, wine, salt, wool and manufactures of linen, cotton, iron and glass.

529. *What can be said of the Danube River?*

It forms an important system of waterways, extending entirely across the empire.

530. *How is Vienna situated?*

On eighty-two small islands, separated by 150 canals crossed by elevated bridges.

531. *What was Poland formerly?*

An important kingdom of Central Europe. After suffering many reverses, it was divided between Russia, Germany and Austria.

532. *Which is the most mountainous country of Europe?*

Switzerland.

533. *Of how many states is Switzerland composed?*

It is composed of twenty-two states or cantons. It is about one-third as large as the State of New York.

534. *For what are the Swiss noted?*

They are noted for their love of liberty and their attachment to their native country.

535. *What language do they speak?*

Most of the population speak the German language. Italian and French are spoken in the cantons adjoining Italy and France.

536. *For what is Geneva noted?*

For the manufacture of watches and jewelry.

537. *How is Italy governed?*

It was formerly divided into a number of states, but the efforts of the people to obtain national unity were successful, and the whole country is now united under a liberal and enlightened government.

538. *In ancient times, for what was this country celebrated?*

It was the central part of the Roman Empire, which ruled all the known world.

539. *For what are the towns and cities noted?*

Almost every place is connected with some event renowned in history or art.

540. *Where is San Marino?*

It is a small republic on the Adriatic Sea.

541. *To what country do the Islands of Sardinia and Sicily belong?*

Italy.

542. *What is the extent of the Ottoman Empire?*

It comprises Turkey in Europe, Asiatic Turkey, the Isle

of Candia, and Egypt. Tripoli, Barca, and Tunis are nominally under its control; also a part of Arabia, Crete and other small islands.

543. *Describe the Turks.*

They are a grave-mannered people, ignorant, bigoted and indolent. Their religion is Mohammedanism.

544. *How does Turkey compare with other European countries in regard to civilization, agriculture, and the arts and sciences?*

It is inferior in every particular. The people are not energetic, and their civilization is far below the standard.

545. *What are Roumania, Servia and Montenegro?*

They were formerly parts of the Turkish Empire, but are now separate Christian States.

546. *What are the exports of Turkey?*

Tobacco, wine, olive-oil, cotton, fruits, wool, carpets, and morocco leather.

547. *What was Greece in ancient times?*

Greece was in advance of all other nations in civilization and learning. Athens was the home of many renowned philosophers and orators.

548. *What is the shape of Greece?*

Very irregular, projecting southward, and having many indentations from the sea, one of which, the Gulf of Lepanto, forms the peninsula of Morea, which is connected with the mainland by the Isthmus of Corinth.

549. *Name the capital cities of Europe.*

St. Petersburg, Stockholm, Copenhagen, Berlin, The Hague, Brussels, Paris, Madrid, Lisbon, Rome, Vienna, Athens, Constantinople, Berne, London, Edinburgh.

550. *With what country is England most extensively engaged in trade?*

The United States.

551. *Which is the most northern town in Europe, yet why is this port never frozen?*

Hammerfest. Its immunity from freezing is due to the warm waters of the Gulf Stream, which flow by the coast of Norway, and the warm southwest return trade-winds.

552. *Name the four most important rivers of Europe.*

The Po, the Rhone, the Rhine and the Danube.

553. *What countries are termed Spanish America?*

Mexico, Central America, West Indies, and the greater part of South America.

554. *What is the surface of Mexico?*

The interior consists of tablelands from 4,000 to 9,000 feet high. The Pacific coast is abrupt and abounds in fine harbors; but on the Gulf of Mexico it is flat and sandy, and deficient in good harbors.

555. *Are the tablelands accessible from the Gulf?*

Only by two carriage-roads: one by Jalapa, from Vera Cruz; the other by Saltillo, from Matamoras and Monterey.

556. *What is the climate?*

As Mexico contains high and low lands, it exhibits a great variety of climate. In ascending from the coast to the surface of the plateau, there are three regions: the hot, swampy and pestilential lowlands; the temperate regions; and the cold, desolate plains above.

557. *What are the inhabitants?*

Whites, Indians, and Spanish Creoles. The Indians and mixed-bloods form the greater part of the population.

558. *How are the seasons divided?*

Into the wet and the dry. The rainy season continues from May to October, and the dry from October to May.

559. *What are the agricultural products of Mexico?*

They vary with its climate. Wheat and barley are produced in the cooler regions, and cotton, tobacco, sugar-cane, tropical fruits and spices in the plains and valleys below.

560. *What is its commerce?*

The commerce of Mexico is limited, and is mostly with England and the United States.

561. *What are the principal minerals?*

Gold and silver, iron and copper.

562. *How is the City of Mexico situated?*

On a plain 7,000 feet above the level of the sea and enclosed by lofty mountains. The city is about two miles from Lake Tezcuco, is in the form of a square, and is noted for its many churches, convents and plazas.

563. *What two volcanoes are visible from the city?*

Popocatapetl and Iztaccihuatl. The former is 17,717 feet high, and its name means Smoking Mountain. The latter is 15,600 feet high, and its name means White Lady.

564. *What is cochineal?*

The cochineal is an insect which feeds on a species of cactus. When killed and dried on the sun it yields a brilliant crimson dye.

565. *What is pulque?*

Pulque is a favorite Mexican beverage, manufactured from the Maguey plant. It is intoxicating.

566. *What is briefly the history of Mexico?*

In 1521 Fernando Cortez, a Spanish adventurer, conquered the country. He found there an extensive kingdom,

with regular laws, and with cities, temples, public roads and many of the arts of civilization. After the conquest the cruelty of the Spaniards drove the Indians back into a state of barbarism. In 1821 Mexico became independent of Spain, and established first an empire and then a republic. The people are restless, and revolutions have been common. By the war with the United States, Mexico lost much valuable territory.

567. *What peninsulas belong to this republic?*

Yucatan and Lower California. They are little known. Yucatan is noted for its ruins of ancient cities and temples.

568. *What is the government of Mexico?*

It is a federal republic of twenty-seven states, one territory, and a small federal district which contains the capital. It was for three centuries the most important colony of Spain.

569. *What does Central America comprise?*

The five independent republics: Guatemala, Honduras, Salvador; Nicaragua and Costa Rica, and British Honduras. Central America bears a general resemblance to Mexico.

570. *What are the capital cities?*

San Salvador, Salvador; Managua, Nicaragua; Tegueigalpa, Honduras; Guatemala, Guatemala; San José, Costa Rica; and Belize, British Honduras.

571. *Where is British Honduras?*

South of the eastern part of Yucatan.

572. *What are the exports of British Honduras?*

Mahogany and other hard cabinet woods, cochineal, tortoise shells, sarsaparilla and cocoa-nuts.

573. *What three routes have been projected for a canal from the Atlantic to the Pacific?*

Across the Isthmus of Panama; by way of the San Juan

River and Lake Nicaragua; and by the Isthmus of Tehuantepec.

574. *How does Mexico compare in size to the United States?*

It is about one-fourth as large.

575. *In what zones is Mexico?*

The north temperate and the torrid; the Tropic of Cancer crosses the central part.

576. *Where are the greatest copper regions in the United States?*

In northern Michigan and Wisconsin.

577. *Where is lead found most abundantly?*

In southwestern Wisconsin and those parts of Illinois and Iowa which adjoin, in Nevada, and in Colorado.

578. *What are the great staple productions of the Southern United States?*

Cotton, tobacco, rice, sugar, corn and sweet potatoes.

579. *Which State produces the most* (a) *cotton*, (b) *rice*, (c) *sugar*, (d) *tobacco*, (e) *potatoes*, (f) *corn*, (g) *wheat?*

(*a*) Texas; (*b*) South Carolina; (*c*) Louisiana; (*d*) Kentucky; (*e*) New York; (*f*) Iowa; (*g*) California.

580. *Which State has the greatest number of* (a) *swine*, (b) *cattle*, (c) *horses*, (d) *mules*, (e) *sheep?*

(*a*) Iowa; (*b*) Texas; (*c*) Illinois; (*d*) Missouri; (*e*) Texas.

581. *Which State produces the greatest quantity of gold? Silver? Iron? Copper? Lead? Coal? Pine lumber? Turpentine, resin and tar?*

Gold, California; silver, Colorado; iron, Pennsylvania; copper, Michigan; lead, Illinois; coal, Pennsylvania; lumber, Michigan; turpentine, etc., North Carolina.

582. *How are turpentine, resin and tar manufactured?*

Turpentine and resin are made of the sap of the pitch pine, by boiling; turpentine is the vapor, while resin is what remains. Tar is also made from the pitch, but by burning; the timber having been placed in nearly a perpendicular position, and covered to prevent a flame, the heat causes the pitch to ooze out and run below, where it can be saved.

583. *From what does North Carolina derive her chief wealth?*

From her pine forests.

584. *What is South Carolina often called?*

The "Palmetto State."

585. *What article can be raised extensively in almost all the States?*

Corn.

586. *Into what physical divisions may we separate the United States?*

Into the Atlantic Slope, the Pacific Slope, and the Central Plain.

587. *What does the Atlantic Slope embrace?*

The country which extends from the Alleghany Mountains to the Atlantic Ocean and Gulf of Mexico.

588. *What does the Pacific Slope embrace?*

The country between the Rocky Mountains and the Pacific Ocean.

589. *What is included in the Central Plain?*

The Mississippi Valley, the Texas Slope, the basin of the St. Lawrence, and the valley of the Red River of the North.

590. *How may we divide the United States with reference to drainage?*

Into the St. Lawrence Basin, the Atlantic Slope, the Mississippi Valley, the Texas Slope, the Pacific Slope, the Inland Basin of Utah, and the Red River Basin.

591. *What is the surface of Asia?*

It is crossed by a system of mountains, tablelands and plains.

592. *What division may we make in this country?*

Arctic Asia, Desert Asia, Peninsular Asia and Insular Asia.

593. *What part is included in each?*

Arctic Asia takes in the Great Siberian Plain. Desert Asia is the belt of high and dry plateaus extending through the central sections. Peninsular Asia is the most important division of the continent, and includes Hindoostan, Indo-China and Corea, with the projecting part of China. Insular Asia includes the richest and most important archipelagoes in the world.

594. *What portion of the human race is in Peninsular Asia?*

One-half.

595. *What can be said of the productions of Asia?*

As Asia embraces all varieties of climates, its productions range from arctic to tropical.

596. *What is the longest inland commercial route on the globe?*

The caravan trade from Pekin through Irkoutsk, Tobolsk, to Moscow and St. Petersburg.

597. *How are the tablelands divided?*

Into those of Central and those of Southern Asia. They are the loftiest and most extensive in the world.

598. *What countries constitute the Great Northern Plain of Asia?*

Turkestan and Siberia. This is a continuation of the great plain of Europe.

599. *Describe the mountain system of Asia.*

It begins with the Taurus Mountains, and is continued by the Elburz and Hindoo Koosh to the Balor Mountains. Thence it branches off into four great chains — the Himalaya, Kuen Lun, Thian Shan, and Alti — which are the most stupendous mountains on the globe.

600. *Where is the Great Desert of Gobi?*

Near the central part of Asia, south of the Thian Shan Mountains. This is only a part of an immense belt of desert land which extends almost across the continent from west to east.

601. *What are the climatic divisions?*

The three of Northern, Central, and Southern Asia.

602. *What is the climate of Northern Asia?*

It is characterized by intense cold, with short intervals of great heat during the summer.

603. *Describe Siberia.*

It is a great plain, comprising more than one-third of Asia. Near the Arctic Ocean it is a barren and desolate region, and the cold is so intense that the spongy soil is frozen to the depth of several hundred feet. Near the Irtysh River the soil is rich and the pasturage good, but there are few inhabitants.

604. *What is the climate of Central and Southern Asia?*

Central Asia has the climate of the temperate zone. It is subject to great extremes of heat and cold, and, except near the shores of the Pacific, is remarkably dry, for the mountain system intercepts the warm and moist winds of

the Indian Ocean. Southern Asia has the climate of the torrid zone.

605. *To what three races do the inhabitants of Asia belong?*

Mongolian, Caucasian and Malay.

606. *What people belong to the Mongolian race?*

The nations living north of the Himalaya Mountains — those of Farther India, the Japanese and the Chinese.

607. *What nations, or tribes, living in Asia belong to the Caucasian race?*

The Georgians, Armenians, Arabs, Persians, Afghans and Hindoos.

608. *What countries are occupied by the Malay race?*

The peninsula of Malacca, and many of the islands of Oceanica.

609. *For what has Siberia long been used?*

For a place of banishment for exiles and criminals. A large part of the population consists of them and their descendants.

610. *To what country does Georgia belong?*

It is a Russian province.

611. *What is noticeable of the inhabitants?*

The people are a vigorous and handsome race.

612. *How is Turkestan divided?*

Into Russian and Independent Turkestan. Russian Turkestan contains a number of districts called khanates, which are ruled by native rulers, although only as vassals of Russia. Independent Turkestan includes those Tartar khanates which are not yet annexed by Russia, representing only a small area of what was formerly Turkestan.

613. *What is the Khan?*

The name given to the rulers of the several independent states of Turkestan.

614. *What does the Chinese Empire include?*

China, the dependent provinces of Mantchooria, Mongolia, Kashgaria and Thibet.

615. *What is said of the population of China?*

It is so dense in some districts that great numbers of the inhabitants dwell constantly in boats on the rivers, or on rafts on the lakes, which they convert into gardens by covering them with earth. They are a very industrious people, and jealous of European aggression.

616. *What are the productions of China?*

The most important are rice, tea and silk. Rice is the chief article of food for the entire population.

617. *What is the government?*

A despotic empire. The laws are severe; for trifling offenses punishment is inflicted with the bamboo whip, while serious crimes almost always meet with death.

618. *What about education in China?*

Education is compulsory. All adult males are able to read and write and possess a knowledge of the elements of arithmetic.

619. *How are all government officers below the emperor selected?*

By means of public competitive examinations.

620. *What can be said of these people in regard to trade, the arts and sciences?*

Their domestic commerce is immense, but their foreign commerce is in the hands of foreigners. Their skill in various occupations cannot be excelled, and many of our most useful inventions were known to them hundreds of

years before they were known to the Europeans, but were not put to a practical use.

621. *Describe the great wall of China. For what purpose was it built?*

The wall is 1,200 miles long, from thirty to forty feet high, and twenty feet thick, with many towers and equipments for defense. It was built about 211 B.C. to keep the Mongol Tartars out of China.

622. *Which are the most important seaports for foreign trade?*

Canton, Shanghai, Ningpo, Fuchow, Amoy.

623. *Name the principal islands of Japan.*

Nipon, Sikoke, Kiusui and Jesso.

624. *What are the chief productions of these islands?*

Rice, wheat, barley, tea, tobacco and camphor.

625. *What is the government of Japan?*

A constitutional monarchy.

626. *What is the emperor called?*

The Mikado.

627. *How do the Japanese compare in enlightenment with the Chinese?*

They surpass the Chinese in intelligence and equal them in mechanical skill. Although of related races, they differ greatly in their language and political institutions. They are quick to adopt the great inventions of the white civilized peoples, such as their military systems, lighthouses, steam-power and electricity.

628. *What two peninsulas comprise India?*

Hindoostan and Indo-China.

629. *What does British India include?*

Nearly all of Hindoostan and the western coast of Indo-

China. It is the richest and most important dependency ever possessed by any nation.

630. *How is Indo-China divided?*

Between Burmah, Siam, Anam and many smaller independent states. All have despotic governments.

631. *What peculiarity is found in the literature of the Hindoos?*

It is written in a peculiar poetical and religious phraseology which has been in use since long before the Christian era. Besides being poetical, the Hindoos are almost universally musical.

632. *What is the government of British India?*

A Governor-General and a Supreme Council are appointed by the British government. The Queen of England is Empress of India.

633. *What and where is Ceylon?*

It is a rich and populous island south of Hindoostan, and a separate colony of Great Britain.

634. *Where is Cochin-China?*

The southeastern coast of Indo-China is called Cochin-China.

635. *Where do the French hold possessions?*

They possess an important province in the southwestern part, with Saigon for its capital.

636. *What are the productions of India?*

Cotton, rice, wheat, opium, sugar, indigo, jute, fine silk fabrics and costly cashmere shawls.

637. *For what is Ceylon especially noted?*

For its coffee and cinnamon.

638. *Describe Afghanistan.*

Persia, Afghanistan and Beloochistan occupy the desert

plateau of Iran, between the valleys of the Tigris and the Indus. The people of Afghanistan are hardy, warlike, and divided among many tribes. As this country is the chief route from India to Western Asia, it is of great commercial and military importance.

639. *What can be said of Beloochistan?*

This country is mostly a barren wilderness, and consists of a number of small states under the headship of the Khan of Kelat.

640. *What is the government of Persia?*

A despotic monarchy, with a sovereign called a Shah.

641. *What is the surface of Arabia?*

The greater part is a desert plateau. The principal fertile tracts are Oman and Yemen, and the mountain valleys.

642. *Describe the inhabitants.*

The greater part of them are Bedouins, a wandering people who live in the deserts, devoting themselves to the care of their camels, horses, goats and sheep. They are generous and hospitable, but vengeful and addicted to plunder.

643. *For what are Mecca and Medina noted?*

Mecca is regarded by Mohammedans as a holy city, the birthplace of Mohammed, and is annually visited by vast numbers of pilgrims. Medina is venerated as the burial-place of Mohammed.

644. *What is the general appearance of the Persians?*

They are polite in their manners, and, having a comparatively high civilization, are often called the French of Asia.

645. *What can be said of the past history of Persia?*

It was once one of the grandest and most formidable governments of the world.

646. *Describe Arabia.*

Arabia is about one-third as large as the United States. A great plateau, having many large and fertile valleys, occupies the interior; surrounding this is a broad belt of deserts, covering more than one-third of the peninsula; while along the coasts is a low and narrow sandy plain, containing a few fertile districts.

647. *What is its government?*

There are several independent states in Arabia, governed by despots called Sultans.

648. *Name the peninsulas of Asia.*

Arabia, Hindoostan, Malacca, Korea, and Kamtschatka

649. *Where is the Isthmus of Kraw?*

It connects Malacca with the mainland.

650. *Which is the most elevated lake in the world?*

Sirikol, the source of the Amoo River, on the tableland of Pamer. It is 15,600 feet above the level of the sea.

651. *Where is Palestine?*

Palestine is in the northeastern part of Arabia, on the Mediterranean Sea.

652. *Where is Jerusalem?*

Jerusalem is the chief city of Palestine.

653. *How wide is Bering Strait? Dover? Gibraltar?*

Bering forty miles, Dover thirty, Gibraltar twelve.

654. *How wide is the Isthmus of Panama? Suez? Tehuantepec?*

Panama twenty-seven miles, Suez sixty-five, Tehuantepec one hundred and thirty.

655. *Which are the five largest islands in the world?*

Australia, Greenland, Borneo, New Guinea and Madagascar.

656. *What are the sizes of the oceans?*

The Pacific Ocean contains about 82,000,000 square miles; the Atlantic, 30,000,000; the Indian, 22,000,000; the Antarctic, 12,000,000; and the Arctic, 4,000,000.

657. *In the production of what minerals does Great Britain exceed every other country?*

Coal, iron, salt, lead, and tin.

658. *Name the largest seven rivers in the United States. Describe them.*

Mississippi, Missouri, Arkansas, Rio Grande, Columbia, Nebraska, and Red.

659. *What are the principal uses of rivers?*

For drainage, commerce and milling.

660. *What important places of the globe are situated on or near the 40th parallel north latitude?*

Philadelphia, Columbus, Indianapolis, Springfield, Denver, Pekin, Constantinople, and Madrid.

661. *What part of the United States is in the same latitude north of the equator, that the southern part of Africa is south of it?*

The boundary line which divides the States of Mississippi, Alabama and Georgia from Tennessee.

662. *What are the latitudes of Cape Horn and the Cape of Good Hope?*

Cape Horn is fifty-three degrees south, and Good Hope about thirty-two degrees.

663. *What is the difference between the natural location of commercial and manufacturing cities?*

Commercial cities require good harbors and water communication to facilitate commerce, while manufacturing cities depend very much upon water power to run their machinery.

664. *Why is the water of Great Salt Lake not fresh?*

Lakes of this class lose water by evaporation only, and retain the salt and other materials carried into them by their affluent rivers.

665. *Name five of the principal articles exported by the people of the United States.*

Cotton, wheat, pork, cheese, machinery.

666. *Name some of the principal articles imported?*

Wool, tea, coffee and spices, dry goods, sugar and liquors.

667. *What are the great waterways for the internal commerce of the United States?*

The Atlantic system, the Mississippi system, the Great Lakes with the St. Lawrence River, and the canals.

668. *Describe the Mississippi system.*

This system contains fifty-six great tributaries, containing 17,000 miles navigable to steamboats and more than 20,000 by barge. It carries an immense commerce, but in some localities the annual floods and droughts prevent a continuous shipment. Below the mouth of the Ohio the Mississippi sometimes rises more than fifty feet.

669. *What does the St. Lawrence system comprise?*

The Great Lakes and the navigable streams which flow into and through the St. Lawrence River. This system is closed for several months in the year on account of ice, but floods or droughts never affect it.

670. *Where are the chief canals?*

They lie at the entrance of Lake Superior, the Niagara Falls, the Rapids of the St. Lawrence and the Erie Canal.

QUESTIONS AND ANSWERS

ON

READING.

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1. *What is reading?*

The enunciation of written language.

2. *What is elocution?*

The delivery of composition.

3. *What does elocution embrace?*

Orthoëpy and expression.

4. *What is expression?*

The manner of delivery.

5. *What mental qualifications must a good reader possess and employ?*

A clear conception.
A vivid imagination.
Real sympathy.
The faculty of imitation.
Vocal power.
Artistic skill.
Precise judgment.

6. *What are the physical requisites for good reading?*

Distinct articulation.
Full and free respiration.

Perfect control of a clear, full, round, musical tone of voice.

Graceful and expressive action.

Cultivated taste and judgment.

7. *What, then, does good reading demand?*

Articulation, Accent, Emphasis, Inflection, Modulation, and Pauses.

8. *What objects are to be aimed at in the study and teaching of reading?*

The acquisition of great knowledge.

The acquisition of a love for reading.

The improvement of the memory, judgment and taste.

Improvement of the social faculties.

Improvement of the health.

A graceful carriage and address.

A preparation for public life.

The prevention and correction of improprieties.

9. *What does orthoëpy embrace?*

Articulation, Syllabication, and Accent.

10. *Define articulation.*

It is the utterance of the oral elements.

11. *What is correct articulation?*

Accurate and distinct utterance of the elementary sounds.

12. *How can a good articulation be acquired?*

By continued practice of the utterance of the elementary sounds, and an observance of the phonetic analysis of syllables and words.

13. *What is Phonetic Analysis?*

It is the separation of syllables and words into the elementary sounds of which they are composed.

14. *What is an elementary sound?*

It is the simplest distinct sound made by the organs of speech.

15. *What are oral elements? How produced?*

They are the elementary sounds that form syllables and words, and are produced by the positions of the organs of speech in connection with the breath.

16. *Into what classes are the elementary sounds of the English language divided?*

They are divided into vocals, subvocals, and aspirates.

17. *Define each of these.*

Vocals are pure tones, and are the prominent elements of all words.

Subvocals are those consonants which produce an undertone of voice when their sounds are uttered.

Aspirates are mere whispers made by the organs of speech and breath.

18. *Give a list of the most common faults in articulation.*

Suppression of vocal sounds in unaccented syllables.

Suppression of subvocal and aspirate sounds.

Incorrect articulation of vocal sounds.

Omission and addition of syllables.

Blending the end of one word with the beginning of the next.

19. *What is accentuation?*

The act of applying accents in reading and speaking.

20. *What is accent?*

The force given to one or more syllables of a word.

21. *How are accented syllables designated?*

By a mark, thus, (′); as *command′ment.*

22. *Name and define the kinds of accent.*

Primary and secondary: the primary calls for the more forcible stress of voice, and the secondary the less forcible.

23. *When two syllables of a word are accented, which has the greater force?*

The primary.

24. *What are the expressions of speech?*

Emphasis, Slur, Inflection, Modulation, Monotone, Personation, and Pauses.

25. *What is emphasis?*

The force given to one or more words of a sentence.

26. *What is the object of emphasis?*

To attract particular attention to the word or phrase upon which it is placed.

27. *How is it accomplished?*

Usually by an increased stress or emphasis, but sometimes by an unusual lowering of the voice, even to a whisper.

28. *Define slur.*

It is the smooth, gliding, subdued movement of the voice used in parenthetic clauses, with words contrasted or repeated, and in explanation.

29. *How are emphatic words distinguished in print?*

By *italics*, SMALL CAPITALS, and CAPITALS.

30. *When should emphatic words be used?*

When words and phrases are important in meaning, or when they point out a difference; when emphatic words are repeated, or when a succession of important words or phrases occurs.

31. *How many kinds of emphasis are there?*

Two: absolute and antithetic.

32. *What is absolute emphasis?*

That which is used to designate the important words of a sentence, without any direct reference to other words.

33. *Define antithetic emphasis.*

It is founded on the contrast of one word or clause with another.

34. *What are inflections?*

The upward or downward slides of the voice.

35. *How many inflections are there?*

Three: the rising, the falling, and the circumflex.

36. *What is the circumflex?*

A union of the rising and falling inflections, beginning with the one and ending with the other.

37. *What is a series?*

A number of words or phrases following one another in the same sentence.

38. *What is a commencing series, and what a concluding series?*

Where a succession of particulars occurs at the beginning or middle of a sentence it is called a commencing series. Where it terminates a sentence it is a concluding series.

39. *What is monotone?*

A sameness of tone.

40. *What is transition?*

A change in the manner of expression.

41. *Define monotony.*

Monotony is a frequent occurrence of the same tone, without reference to the sense.

42. *When is the rising inflection used?*

It is generally used when the sense is incomplete; in

questions which may be answered by yes or no; when a word or sentence is repeated as a kind of interrogatory exclamation; usually in negative sentences; and in the last sentence but one of a passage.

43. *When is the falling inflection used?*

When the sense is incomplete; when language demands strong emphasis; in exclamations; and in questions which cannot be answered by yes or no.

44. *In what is the circumflex mainly used?*

In the language of irony, sarcasm and contrast.

45. *What is modulation, and how is it divided?*

Modulation is the variation of the voice made in reading and speaking, and is divided into pitch, force, quality, and rate.

46. *What is pitch, and how divided?*

Pitch is the degree of elevation of the voice, and is divided into high, moderate and low. High pitch is that which rises above the usual speaking key, and is used in expressing joyous and elevated feelings. Moderate pitch is that which is heard in common conversation, and is used in expressing ordinary thought and moderate emotion. Low pitch is that which falls below the usual speaking key, and is employed in expressing emotions of sublimity, awe and reverence.

47. *Define force and its divisions.*

Force is the volume, or loudness of voice, and is divided into loud, moderate and gentle. Loud force is used in expressing violent passions and vehement emotions. Moderate force is a medium loudness of voice, and is employed in narrative, description, and ordinary assertion. Gentle or subdued force is employed to express fear, caution, secrecy, solemnity, and tender emotions.

48. *Define rate, and tell how it is classified.*

Rate is the speed of utterance, and is divided into quick, moderate and slow. Quick rate is used to express joy, mirth, violent anger and sudden fear. Moderate rate is employed for the same purposes as moderate force. Slow rate is used to express grandeur, vastness, pathos, horror and consternation.

49. *What is quality, and how divided?*

Quality has reference to the kinds of sound uttered, and is divided into the pure tone, orotund, aspirate, guttural, and trembling.

50. *What is the difference between quantity and pitch?*

Quantity has reference to loudness or volume of sound; pitch to the elevation or depression of a tone.

51. *What is the difference between force and emphasis?*

Force is the energy with which the whole is uttered; emphasis is the stress on a particular portion.

52. *What is cadence?*

The dropping of the voice at the end of the sentence, which indicates that the sense is complete.

53. *What is stress?*

The manner in which force is applied.

54. *What is climax?*

Climax is an utterance gradually increasing in intensity, and changing in pitch and movement.

55. *Define grouping.*

Grouping is that nice modulation and adaptation of the voice to the sentiment expressed which renders the utterance not only more impressive but more pleasing to the ear.

56. *What is pure tone?*

A clear, smooth, flowing sound, with moderate pitch.

57. *What is the orotund quality?*

The pure tone deepened, enlarged and intensified, and is adapted to the expression of the sublime and pathetic emotions.

58. *Describe the aspirated tone.*

An expulsion of the breath, the words being spoken in a whisper.

59. *What is the guttural quality?*

A deep undertone, expressing hatred, contempt, loathing.

60. *When is the trembling tone used?*

The trembling tone is a constant waver of the voice, used to express an intense degree of suppressed excitement, or in representing the speech of enfeebled old age.

61. *What is personation?*

Changes of the voice necessary to represent two or more persons speaking.

62. *What are pauses?*

Suspensions of the voice in reading or speaking.

63. *What are grammatical pauses?*

Pauses indicated by punctuation marks.

64. *Define rhetorical pauses.*

They are suspensions of the voice which the sense requires when a grammatical pause is not admissible.

65. *What are etymological points?*

Points used to indicate something in regard to the formation, use, or omission of words or parts of words.

66. *Explain the apostrophe, caret, diæresis, marks of quantity, marks of accent, hyphen, period.*

The *apostrophe* (') is used to show the omission of a letter or letters; as, Sec'y.

The *caret* (∧) is used to show some omissions in writing; as,

come

"The king is (∧) to marshal us."

The *diæresis* marks the separation of contiguous vowels; as, preëngage.

Marks of quantity are used to show that the vowel is long or short, and are placed over the letters, (¯ ˘).

The *marks of accent* express the tones of the voice and are the grave (`), the acute (´), and the circumflex (ˆ).

The *hyphen* (-) is used to separate syllables, or to unite the parts of a compound word.

The *period* (.) is used to show the abbreviation of a word; as, lat. for latitude.

67. *What are the points of reference?*

Points used to refer the reader to some other place on the page or the book; they are: the *Asterisk* (*); the *Obelisk* or *Dagger* (†); the *Double Dagger* (‡); the *Section* (§); *Parallels* (‖); the *Paragraph* (¶). If necessary, these points may be doubled.

68. *What is suspensive quantity?*

Prolongation of the voice at the end of a word without making an actual pause.

69. *What does quantity embrace?*

Force and rate.

70. *What is the difference between enunciation and pronunciation?*

Enunciation is the utterance of words; pronunciation, the mode of utterance.

71. *What quality of voice is generally used in reading and speaking?*

The pure tone.

72. *What determines the proper accent of words?*

General usage.

73. *How is inflection sometimes affected by emphasis?*

It sometimes changes the falling to the rising inflection.

74. *What is the difference between the construction of prose and poetry?*

Prose pays no attention to the melodious arrangement of its words, while poetry is written with regard to the feet in each line, or the rhyme, or both.

75. *What is a parenthetic clause, and how should it be read?*

Something abruptly introduced into a sentence for the purpose of modifying, explaining or adding to the leading proposition. It should be read in a lower voice.

76. *When melody comes into conflict with accent, which must yield?*

Accent.

77. *Give a principle of reading that will admit of general application.*

Be sure that you understand what you read, and endeavor to express the sentiments of the author as you would express them if they were your own and you were talking.

78. *What are some of the essential qualities of good reading?*

To read slowly, mind the pauses, give the proper inflections, speak plainly, and read as if talking.

79. *Give rules for the use of capitals.*

Capital letters are used:

To begin the first word of a sentence;
To begin proper names;
To begin titles of honor;
To begin the first word of every line of poetry;
To begin the names of objects personified;

In writing the pronoun I, and the interjection O;
To begin appellations of the Deity;
To begin the names of the days of the week and of the month;
To begin direct quotations;
To begin words derived from proper names;
To begin the chief words in the titles of books, headings of divisions of books, chapters, discourses, etc.;
To begin words of special importance.

QUESTIONS AND ANSWERS

ON

ENGLISH GRAMMAR.

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1. *What is English grammar?*

The art of speaking and writing the English language correctly.

2. *What is the object of studying grammar?*

To be able to understand, speak, and write a language correctly.

3. *What is language?*

Any method of communicating thought or feeling.

4. *What can you say of the composition of language?*

It is of two kinds, prose and verse.

5. *Into what parts is grammar divided?*

Pronunciation, orthography, etymology, syntax and prosody.

6. *Of what does pronunciation treat?*

Of the sounds of letters and syllables.

7. *Define etymology.*

It treats of the different parts of speech, their derivation and modification.

8. *Of what does syntax treat?*

Of the arrangement and relation of words in sentences.

9. *Of what does prosody treat?*

Of versification, punctuation, figures and utterance.

10. *What is the basis of grammar?*

The usage of the best authors.

11. *Of what does language consist?*

Of sounds which, combined, form words which represent ideas.

12. *How are words classified, and on what grounds?*

As nouns when they are names of beings, places or things;

As pronouns when they are substitutes for names or facts;

As adjectives when they qualify or limit names;

As verbs when they assert action, being or condition;

As adverbs when they modify an assertion or a quality;

As prepositions when they express relations of things or of thought;

As conjunctions when they introduce or connect words and sentences;

As exclamations when they express a sudden or intense emotion; and

As words of euphony when they are used for rhetorical effect.

13. *By what general name are the different classes of words called?*

Parts of speech.

14. *How are the nouns divided?*

Into proper and common.

15. *How are common nouns again divided?*

Into collective, abstract and verbal.

16. *What is a collective noun?*

One that denotes a group or number of objects.

17. *What is an abstract noun?*

The name of some quality of a substance.

18. *What is a participial noun?*

A participle or infinitive used as a noun.

19. *When does a proper noun become a common noun?*

When it is used to denote a whole class; as, "The *Washingtons* of the world are few."

20. *When does a common noun become proper?*

When personified, or used as a proper noun; as, "Come, gentle Spring!"

21. *What is the office of a pronoun?*

To avoid the repetition of nouns.

22. *What is the antecedent of a pronoun?*

The word, phrase or clause which the pronoun represents.

23. *What is the subsequent of a pronoun?*

Interrogatives or relatives of the interrogative kind, when they are used in asking questions, have no antecedents, but relate to some word or phrase contained in the answer, which is called the subsequent.

24. *What is the difference between antecedent and subsequent?*

The antecedent signifies that which goes before, the subsequent that which follows.

25. *Into what classes are pronouns divided?*

Personal, relative, interrogative and adjective.

26. *What is a personal pronoun?*

One which distinguishes the persons.

27. *Name the personal pronouns.*

I, *thou* or *you*, *he*, *she* and *it*, with their compounds and declined forms, are the personal pronouns.

28. *Where are* thou, thy, thine, thee *and* ye *used?*

In the Bible and addresses to the Deity, in the conversation and correspondence of certain religious sects, and often in poetry and romance.

29. *In parsing, what disposition should be made of the pronouns* ours, yours, hers, theirs *and* mine?

As these words are equivalent to a noun and pronoun, the parsing should correspond with the words which they represent.

30. *What is the peculiarity about the pronoun* it?

The antecedent of *it* is sometimes considered lost, when the pronoun denotes merely the state or condition of things, or a point of time, or when it introduces a sentence and is explained; as, "It rains"; "It is twelve o'clock"; "It was moonlight"; It is mean to take advantage of another's distress." Some authors consider *it* in the above examples as having no antecedent, yet, if we observe closely, there may be one somewhat remote; as, in the first example, we might use *clouds* for the antecedent; in the second example, *time;* in the third, *night;* and in the last, *act*, as, "The *act* is mean," etc.

31. *What is a compound personal pronoun?*

My, *thy*, *your*, *him*, *her*, or *it*, compounded with *self* to form the singular; and *our*, *your*, and *them*, compounded with *selves* to form the plural.

32. *What is a relative pronoun?*

A pronoun which joins a descriptive clause to its antecedent.

33. *To what are the relatives* who *and* which *applied?*

Who is applied to persons only; *which* to persons or things.

34. *How is the relative* what *used?*

What is used in place of *that which* or *things which*, and may denote persons or things.

35. *When is* as *a relative pronoun? When is the word* that?

When it is preceded by *such*, *many*, or *same*, and relates to the objects thus specified. *That* is a relative pronoun when it is equivalent to *who*, *whom* or *which*.

36. *What pronoun is used when the antecedent is supplied?*

The pronoun *which*.

37. *What are the compound relative pronouns?*

Who, *which*, and *what*, with *ever* and *soever* annexed.

38. *What is an interrogative pronoun?*

One used to ask a question.

39. *What is a responsive, or indirect interrogative pronoun?*

One used indirectly as an interrogative; as, "Tell me *what* truth is."

40. *What are adjective pronouns, and how are they divided?*

Adjectives sometimes used as pronouns. They are divided into four classes: distributive, demonstrative, indefinite, and reciprocal.

41. *To what do distributive pronouns relate?*

To objects taken singly. They are *each*, *either*, and *neither*.

42. *What is the difference between the demonstrative and indefinite pronouns?*

The demonstrative pronouns point out objects definitely, while the indefinite relate to objects indefinitely. The demonstratives are *this*, *these*, *that*, *those*, *same*, *former*, *latter*. The indefinites are *one*, *ones*, *other*, *others*, *any*, *some*, *such*, *all*, *both*, and *none*.

43. *What do reciprocal pronouns denote?*

They have the same signification, and consequently are convertible, and may be used for each other.

44. *How should* either, neither, each other, *and* one another *be used?*

In speaking of two, *either*, *neither* and *each other* should be used; but in speaking of more than two, *one another.*

45. *How should* this *and* that *be used?*

That should be applied to the more distant, the first mentioned, or the absent; *this*, to the nearer, the last mentioned, or the present.

46. *What properties have nouns and pronouns?*

Gender, person, number and case.

47. *When are objects personified?*

When they are regarded as persons. Nouns sometimes acquire gender by personification.

48. *In personified objects, when is the masculine gender preferred?*

When the character of the object denotes size, power or domineering qualities; as, "The *Sun* seemed shorn of his beams." "Lo, steel-clad *War* his gorgeous standard rears."

49. *When is the feminine gender preferred?*

When the character of the object is noted for beauty, amiability, productiveness or submission, as "Soon *Peace* shall come with all her smiling train." The earth, the moon, a ship, when personified, are given the feminine gender.

50. *What are the methods of distinguishing the two sexes?*

By different words, by different endings, and by a distinguishing word; as, father, mother; emperor, empress; *man*-servant, *maid*-servant.

51. *When and how are proper nouns made plural?*

When they refer to a class of the same character, they are made plural by adding *s* when it does not coalesce in sound, otherwise *es;* as, the Cherokees; the Napoleons; the Van Nesses.

52. *What class of nouns is generally used in the singular number? How may they be used in the plural?*

The names of substances, actions, states, qualities, arts, sciences and diseases, when they refer to the kind of thing; but when different kinds are meant they are plural; as, *wine, wines; tea, teas; fever, fevers; religion, religions.*

53. *When is a collective noun singular? When plural?*

When the whole group is regarded as one thing, it is singular, but plural when different groups are meant, or when it refers to the individuals composing a group; as, the *army* is large; the *armies* are moving; the *congregation* owns a church; the *congregations* are of various nationalities; most *people* are eager to succeed.

54. *How are most nouns made plural?*

By adding *s* to the singular; but those ending in *i*, *o*, *u*, *y*, preceded by a consonant, or in *s*, *x*, *z*, *sh*, and soft *ch*, add *es*.

55. *What is the origin of the use of the possessive sign* 's?

It is the abbreviation of the old English ending *es* or *is;* the sign (') being called an apostrophe, because it indicates the omission of the *e* or *i*.

56. *How are most compound words made plural?*

By making plural that part described by the rest; as mouse-traps, cupfuls.

57. *How are the titles* Mr., Mrs., Miss *and* Dr. *made plural?*

Mr., Dr. and Miss are made plural by annexations; as

Messrs., Drs., Misses. When the title is Mrs., or when a numeral stands before the title, the title is made plural; as, the *Mesdames* Brown, the two *Misses* Smith.

58. *How is the plural of foreign nouns formed?*

Most of them retain their foreign plurals when used in the English language.

59. *How are classic words ending in* a, us, um *or* on, is, x *or* ex *changed to form the plural?*

When the ending is *a*, it is changed to *æ* or *ata*, *us* is changed to *i*, *um* or *on* to *a*, *is* to *es* or *ides*, *x* or *ex* to *ces* or *cies*.

60. *Form the plural of the following words: Formula, larva, nebula, vertebra, focus, radius, sarcophagus, stimulus, phenomenon, datum, analysis, synthesis, axis, basis, crisis, emphasis, oasis, parenthesis, thesis.*

Formulæ, larvæ, nebulæ, vertebræ, foci, radii, sarcophagi, stimuli, phenomena, data, analyses, syntheses, axes, bases, crises, emphases, oases, parentheses, theses.

61. *How are letters and figures made plural?*

By annexing *'s;* as, the *L's;* the *3's*.

62. *What is enallage as used in grammar?*

A change of words, or a substitution of one gender, number, case, person, tense, mode or voice of the same word, for another.

63. *What is case? Name the cases.*

That property of nouns and pronouns which shows their relation to other words. The cases are nominative, possessive, and objective.

64. *When is a noun or pronoun used in particular cases?*

It is used in the nominative when it is the subject of a verb; in the objective when it is the object of a verb or

preposition; and in the possessive when it denotes possession.

65. *When is a noun or pronoun used independently?*

In direct address: "*John*, your father is here." In exclamation: "Alas, poor *Yorick!*" In pleonasm or specification: "*He* that hath ears, let him hear."

66. *How is the possessive case usually denoted?*

By adding *s* in the singular number, and putting the apostrophe after the *s* in the plural.

67. *How can the possessive case be expressed without the apostrophe?*

By using *of;* as, "The death of Socrates."

68. *When are two terms in apposition, and when is one predicated by the other? In what must these terms agree?*

When a verb joins the terms, one is predicated of the other; as, "He is president." When no verb joins them, the latter term is in apposition with the former; as, "Webster, the orator." These terms must agree in case.

69. *How is a compound term expressed in the possessive case?*

It takes the possessive sign but once; generally at the end, or next to the name of the object possessed; as, "The *court martial's* decision," "*Daniel Webster's* oration."

70. *When is a noun or pronoun in the same case as another?*

When it denotes the same person or thing.

71. *In how many cases are compound personal pronouns used?*

Only in the nominative and objective cases, and then they retain the same form.

72. *Decline* who, which, what, *and* that?

Nominative *who*, possessive *whose*, objective *whom;*

which and *what* have the same form in the nominative and objective, but borrow *whose* for their possessive. *That* is not declined.

73. *When may* that *have two cases?*

When it is a relative, and equivalent to *that which.*

74. *What is declension?*

A regular arrangement of the grammatical properties of a noun or pronoun.

75. *How are the articles* the, a, *and* an *used?*

The is used to point out a particular one, object or class; *a* or *an*, to show that no particular one of a class is meant.

76. *Why are both* a *and* an *called the indefinite article?*

Because they have the same meaning. *As* is used when the next word begins with a consonant sound; *an*, when the next word begins with a vowel sound.

77. *What is an adjective?*

A word used to qualify or limit the meaning of a noun or pronoun.

78. *How are the adjectives divided?*

Into descriptive and definitive.

79. *Define each class.*

The descriptive adjective describes or qualifies; the definitive specifies or limits.

80. *Into what smaller classes are adjectives divided?*

Into common, proper, numeral, pronominal, participial and compound.

81. *Define a common adjective.*

The common adjective expresses quality.

82. *Define a proper adjective.*

A proper adjective is one derived from a proper name.

83. *What is a participial adjective?*

A participle used as an adjective.

84. *What is a compound adjective?*

A compound word used as an adjective.

85. *What is a numeral adjective?*

One that expresses number.

86. *How are the numeral adjectives divided?*

Into cardinal, ordinal, multiplicative, and indefinite.

87. *Give examples of each class.*

The cardinals are *one, two,* etc.; the ordinals, *first, second,* etc.; the multiplicative, *single, double;* the indefinite, *few, many.*

88. *What is a pronominal adjective?*

One sometimes used as a pronoun.

89. *Into what classes are pronominal adjectives divided?*

The distributive, the demonstrative and the indefinite.

90. *What modifications have adjectives?*

Number and comparison.

91. *What is comparison?*

A variation in the form of adjectives and adverbs to denote different degrees of meaning.

92. *How many degrees are there?*

Three: positive, comparative and superlative.

93. *Define the respective degrees.*

The positive degree expresses the quality of the adjective; the comparative expresses the quality in a higher or lower degree; the superlative expresses the quality in the highest or lowest degree.

94. *What parts of speech have comparison?*

Adjectives and adverbs.

95. *How are degrees below the positive expressed?*

Usually by adding *less* and *least.*

96. *When should* more *or* most *be preferred in comparison?*

Usually with adjectives of more than two syllables, or those of two syllables that do not end in *le* or *y.*

97. *What is the difference between comparison ascending and comparison descending?*

One expands in volume of expression, or grows greater in its comparison, while the other decreases with the prefixes *less* and *least.*

98. *When are adjectives redundant?*

When they have more than one form for the superlative; as, *near, nearer, nearest* or *next.*

99. *When adjectives of one syllable and those of several syllables come together, which are placed first and how are they compared?*

The monosyllables are placed first, and all are compared by prefixing *more* and *most;* as, "The more *nice* and *elegant* parts."

100. *Must adjectives always agree with their substantives in number?*

Yes, although the substantive is not always expressed.

101. *When does an adjective become a noun?*

When it is used abstractly, or in place of a noun of which it expresses quality; as, the briny *deep*, the *good.*

102. *What is a verb? A regular verb? An irregular verb?*

A verb is a word used to state the act or state of the subject. A regular verb is one that forms its past tense by adding *ed;* an irregular verb does not add *ed.*

103. *What are the principal parts of a verb?*

The present tense, past tense, present participle, and perfect participle.

104. *Why are these called the principal parts?*

By means of these and the auxiliary verbs all the other parts of the verb can be formed.

105. *What is a redundant verb? A defective verb? A finite verb?*

A redundant verb is one which has more than one form for some of its principal parts. A defective verb is wanting in some of its principal parts. A finite verb predicates the act or state of its subject.

106. *What parts of a verb are not finite?*

The infinitives and participles.

107. *What is a transitive verb? An intransitive verb?*

A transitive verb is one which has or requires an object. An intransitive does not have or require an object.

108. *When may a transitive verb become intransitive?*

When its chief design is to set forth an act and leave the object unknown. "She reads well."

109. *When may an intransitive verb become transitive?*

In poetical expressions, in a causative sense, and in idiomatic expressions; as, *to march* armies, I *laughed myself* hoarse.

110. *What is a neuter verb?*

One which expresses state without action or the receiving of action.

111. *What is a principal, and what an auxiliary verb?*

A principal verb expresses the chief act or state. An auxiliary verb helps other verbs to express their grammatical properties.

112. *Define a redundant verb.*

A redundant verb is so called because it has more than one form for some of the modes and tenses.

113. *Give examples of redundant verbs.*

Be, awake, bereave, bet, dig, dwell, lean, keep, hang, gild, kneel, hew, knit.

114. *What properties have verbs?*

Voice, mode, tense, person and number.

115. *Define voice, mode and tense?*

Voice shows whether the subject does or receives the act. Mode is manner of assertion. Tense expresses time.

116. *What are the person and number of a verb?*

The form of the verb to agree with the subject.

117. *When is a verb in the active or passive voice?*

In the active when the subject acts, in the passive when it receives the act.

118. *How is a verb in the active voice changed into the passive?*

By using the object of a verb for the subject.

119. *To what verbs does* voice *belong?*

To transitive verbs only.

120. *How many modes are there?*

Four: indicative, subjunctive, potential and imperative. Some grammarians add an infinitive mode.

121. *Define them.*

The indicative indicates or declares a fact. The potential expresses power, possibility, liberty, inclination, duty and necessity. The subjunctive expresses a wish, an uncertainty or a future contingency. The imperative commands or entreats.

122. *What is the difference between the forms of the indicative and subjunctive modes?*

The only difference is in the third person singular of two of the tenses, the present and the present-perfect.

123. *How many tenses are there in each of the modes?*

There are six in the indicative; three in the subjunctive — the present, past, and past-perfect; in the potential, four — the present, present-perfect, past and past-perfect; and in the imperative, one — the present tense.

124. *What are the signs of the tenses?*

In the indicative mode *have* is the sign of the present-perfect tense; *had* the sign of the past-perfect; *shall* or *will*, of the future; *shall have* or *will have*, of the future-perfect. The present or past tense is the simplest form, expressing present or past time. The signs of the present potential are *may*, *can*, *must;* of the present-perfect, *may have*, *can have*, *must have;* of the past, *might*, *could*, *would*, *should;* of the past-perfect, *might have*, *could have*, *would have*, *should have*. The three tenses of the subjunctive mode are the same in form as the indicative, except in the singular number of the present and past tense, which takes the plural form without variation. The imperative has the same form as the present indicative.

125. *What are the forms of a tense?*

The different ways in which it can be expressed; as the common form, the emphatic, the progressive, the passive and solemn.

126. *What is the emphatic form of a verb?*

That which denotes emphasis, by making *do* or *did* a part of the verb.

127. *How is the passive form expressed? How the progressive?*

The passive form is expressed by combining the verb *be*, or some of its variations, with the perfect participle. The progressive form represents the continuation of the act or state, and is formed by combining the verb *be*, or some of its variations, with the present participle.

128. *What is the ancient form?*

The old common form that is still used in the solemn style. With *thou* and *ye* for subjects, it has the ending *t*, *st* or *est* for the second person singular, and *th* or *eth* for the third person singular.

129. *How is a proposition made interrogative? How made negative?*

Interrogative, by placing the verb, or part of it, before the nominative. Negative, by placing *not* after the verb or after the first auxiliary.

130. *When the subject consists of words differing in person, how is the form of the verb or pronoun determined?*

The first person is preferred to the second, and the second to the third. You, John and I *are* attached to *our* country. If the nominatives are taken separately, or connected by *or* or *nor*, the verb prefers the nominative next to it. He or I *am* to blame.

131. *What is an impersonal verb?*

A verb having person and number without a subject; as, *methinks*, *meseems*.

132. *What properties have the auxiliary verbs?*

Voice, mode, tense, person and number.

133. *What are the auxiliary verbs?*

Be and its variations; *do*, *did*; *can*, *could*; *have*, *had*; *may*, *might*; *must*; *shall*, *should*; *will*, *would*.

134. *Which of these are sometimes principal verbs?*

Be, or *am*, *was*, *do* and *have*.

135. *When is it proper to use* shall *and* should?

When a duty, command, determination, resolve is to be expressed, and in future propositions when the subject is of the first person and no reference is made to the will of the subject.

136. *When is it proper to use* will *and* would?

When the idea is that of willingness, inclination, or in future propositions when the subject is of the second or third person and no compulsion is to be expressed.

137. *When are* do, be *and* have *principal verbs?*

When not combined with any other verb expressed or understood.

138. *What stands as an answer to* what? *or* whom? *of a transitive verb?*

The object or complement of the transitive verb stands as an answer to the question what? or whom? with the verb.

139. *How can you determine whether a verb is transitive or intransitive?*

By asking the question what? or whom? If the verb will carry an answer relating to some particular thing it is transitive, but if it does not carry the subject to some termination it is intransitive.

140. *How many terms are implied in a transitive verb?*

Three: subject, predicate and object.

141. *How many terms are implied in an intransitive verb?*

Only two: the subject and predicate.

142. *What is a copulative verb?*

One used to assert the condition of a subject; as, sugar is sweet. It is an incomplete verb using an adjective, noun or pronoun relating to the subject, and is often called a neuter verb.

143. *What are the principal copulative verbs?*

Be, become, seem, appear, grow, feel, look, smell, taste, etc.

144. *What is the peculiarity of copulative verbs?*

They imply in their meaning the verb *to be;* thus, *become* is really to "come to be"; *appear* is to "be in appearance."

145. *What is an infinitive?*

The form of the verb generally preceded by *to*, expressing an act or state without predicating it. There are two infinitives: the *present* and the *perfect.*

146. *How is the present infinitive formed, and what does it denote?*

In the active voice, by combining *to* with the simplest form of the verb; in the passive voice, by using *to be* with a simple participle.

147. *How is the perfect infinitive formed, and what does it denote?*

By combining *to have* or *to have been*, with a simple participle. It represents the completion of the act or state at the time referred to.

148. *When is* to, *the sign of the infinitive, omitted?*

When the infinitive is combined with the auxiliary or after the active verbs *bid*, *dare*, *let*, *make*, *need*, *see*, *hear*, *feel*, and sometimes after *have*, *help*, *please* and *find.*

149. *What is a participle?*

A word derived from a verb, participating in the properties of a verb and adjective. It is generally formed by adding *ing*, *d* or *ed* to the verb. There are two participles: the *present* and the *perfect.*

150. *How is the present participle formed?*

By annexing *ing* to the simplest form of the verb, so as to represent the act or state as present and continuing at the time referred to.

151. *How is the perfect participle formed?*

By annexing *d* or *ed* to the simplest form of the verb, so

as to represent the act or state as completed at the time referred to.

152. *What voices have participles?*

The simple present participle of a transitive verb is nearly always in the active voice. The simple perfect participle of a transitive verb is either active or passive; it is active when *have* or any of its forms is combined with it, and passive when it stands by itself, or when *be* or any of its forms is combined with it.

153. *What is a compound participle?*

Being, having, or *having been,* combined with some other participle.

154. *What do* being, having *and* having been *express in relation to participles?*

Being expresses the present passive participle; *having* expresses the perfect active participle; *having been* expresses the perfect passive participle.

155. *What are some of the chief particulars in which participles and infinitives agree and differ?*

They have voice and tense; are annexed to auxiliary verbs; partake of the nature of nouns, adjectives and adverbs; and, when nouns, assume case. A participle may become an adjective, it may govern the possessive case, it may become concrete and assume number, it may be used after prepositions; but an infinitive has none of these attributes.

156. *What is the conjugation of a verb?*

The regular arrangement of the modes, tenses, persons, numbers and participles.

157. *What is the inflection of a verb?*

Its conjugation.

158. *What is meant by the weak and the strong conjugation of verbs?*

The weak conjugation is the regular formation of the verb; as, *move, moved.* The strong conjugation is its irregular formation; as, *grow, grew,* with the past participle ending in *n* or *en.*

159. *What is the theme of a verb?*

That form which admits of the preposition *to* before it; in other words, the infinitive form of the verb.

160. *What is a paradigm?*

A model of inflection by which to inflect other words.

161. *What is it to make a verb?*

To place a word in the position of a verb where it will carry the properties of an action.

162. *What is the synopsis of a verb?*

An outline of its parts through the modes and tenses, in a single person and number.

163. *What forms of a verb are called composite?*

Those which consist of auxiliaries combined with participles or infinitives.

164. *What is an adverb? How are most of them formed?*

A word used to modify the meaning of a verb, adjective, or other adverb. Most adverbs are formed from adjectives by adding *ly.*

165. *What is a conjunctive adverb?*

One used to perform the office of a conjunction and adverb at the same time.

166. *Into what classes are adverbs divided?*

Into adverbs of time, place, degree and manner.

167. *What is the difference in the use of an adjective and an adverb?*

An adverb expresses manner, or describes the act; an adjective describes the subject or object.

168. *How can we ascertain to what class adverbs belong?*

Adverbs of time answer the questions: *When? How long? How often?* Adverbs of place answer the questions: *Where? Whence?* Adverbs of degree answer the questions: *How much? To what extent? In what degree?* Adverbs of manner answer the question: *How?*

169. *What is a preposition? An adjunct?*

A word used to show the relation between a following noun or pronoun and some other word. An adjunct is a preposition with its objects and modifiers, and may relate to a substantive, verb, adjective or adverb.

170. *What may a substantive be when governed by a preposition?*

A noun, a pronoun, an infinitive, a participial noun, or a clause.

171. *When does a preposition become an adverb?*

When there is no word to govern; as, The eagle flew *up*, then *around*, then *down* again.

172. *What is a conjunction? Correlative connective?*

A word used to connect words, phrases or propositions. A correlative connective is one of a separated pair that connect the same parts; as, *Neither* this *nor* that.

173. *What is the difference between analysis and synthesis?*

Analysis is the resolving of a whole into its parts. Synthesis is the combining of the parts to form a whole.

174. *What is parsing?*

The resolving of a sentence into its parts, giving their properties and syntax.

175. *What is relation? agreement? government?*

The relation of words is their connection with one another; agreement is their similarity in person, number, gender, case, etc.; government is the power one word has over another.

176. *What is a sentence? clause? proposition? phrase?*

A sentence is an assemblage of words making complete sense; a clause is a proposition which makes only part of a sentence; a proposition is a subject combined with its predicate; a phrase is two or more words, but not an entire proposition.

177. *What is a declaratory sentence? interrogatory? imperative? exclamatory?*

A declaratory sentence expresses a declaration; an interrogative sentence asks a question; an imperative sentence expresses a command or entreaty; an exclamatory sentence expresses an exclamation.

178. *What is a simple sentence? compound? complex?*

A simple sentence has but one proposition; a compound sentence has two or more propositions; a complex sentence has one principal clause, with one or more dependent clauses.

179. *What are the subject and predicate of a sentence?*

The subject is that of which something is said; the predicate is what is said of the subject.

180. *What are the logical and grammatical subject and predicate of a sentence?*

The grammatical subject and predicate are the subject

and predicate words; the logical subject and predicate are these words with all their modifiers.

181. *What is discourse, and of what may it treat?*

Discourse is a train of thought expressed in language, and may be description, narration, science or philosophy.

182. *What is a paragraph?*

A sentence or combination of sentences, completing a train of thought, and distinguished by a new beginning.

183. *Upon what is analysis based?*

Three relations: the predicate relation, the adjective relation, and the adverbial relation.

184. *What are elements of sentences?*

Words, phrases and clauses.

185. *What must every proposition have?*

A subject and predicate.

186. *What is a modifier?*

A modifier is a dependent word, phrase or clause, used to limit or vary the meaning of some other word or expression; it may be an adjective or an adverbial modifier.

187. *By what may a noun and pronoun be modified?*

By an article, an adjective, a possessive, an appositive, a participle, or an infinitive, as well as by phrases and clauses.

188. *By what may a verb be modified?*

By an object, a predicate adjective, an adverb, a participle, or an infinitive, as well as by phrases and clauses.

189. *When an infinitive or participle is used as a noun, what modifiers does it take?*

The infinitive takes only the modifiers of a verb; the participle those of either a verb or a noun.

190. *What parts of speech are never modified?*

Articles, prepositions, conjunctions, and interjections.

191. *What kinds of words are connectives?*

Conjunctions, prepositions, relative pronouns, responsive pronouns, and conjunctive adverbs.

192. *In the analysis of phrases, what forms are given?*

Simple, complex, compound, mixed, and prepositional.

193. *What part of a sentence is considered the most important?*

The beginning; the next most important is the end.

194. *When may a subordinate element occupy the chief place?*

When it is uppermost in the speaker's mind, or denotes what is most striking. "*Out flew* millions of flaming words." "*By these* we acquired our liberty."

195. *What is a period in grammar?*

A sentence so constructed that the meaning is suspended till the close.

196. *In what do all the errors of language consist?*

In the improper arrangement of words, in the use of improper words, in the omission of words, and in the use of unnecessary words.

197. *What is a figure in grammar?*

A deviation from the ordinary form; a construction or application of words for the sake of brevity, force, or beauty.

198. *Name the figures of grammar.*

The figures of orthography, of etymology, of syntax, and of rhetoric.

199. *What is a figure of orthography?*

An intentional deviation from the ordinary or true spelling of a word.

200. *What is a figure of etymology?*

An intentional deviation from the ordinary formation of a word.

201. *What is a figure of syntax?*

An intentional deviation from the ordinary construction of words.

202. *What is a figure of rhetoric?*

An intentional deviation from the ordinary application of words.

203. *What are the names of the most important figures of etymology?*

Aphæresis, syncope, apocope, prosthesis, paragoge, tmesis, diæresis, synæresis.

204. *Define them.*

Aphæresis is the shortening of a word by taking a letter or syllable from the beginning; as, *'gainst*, *there's*. Syncope is the shortening of a word by taking a letter or a syllable from the middle; as, *red'ning* for reddening. Apocope is the shortening of a word by taking a letter or syllable from the end; as, *th'* for the. Prosthesis is the lengthening of a word by prefixing a syllable. Paragoge is the lengthening of a word by annexing a syllable. Tmesis is the insertion of a word between the parts of a compound; as, on *which* side *soever*. Diæresis is the division of two concurrent vowels into different syllables usually marked thus, *coöperate*, *aërial*. Synæresis is the joining of two syllables into one; as, *dost*, *loved*, *learned*, for do-est, lov-ed, learn-ed.

205. *What is ellipsis? aposiopesis? zeugma? pleonasm?*

Ellipsis is the omission of words, and elision the omission of letters. Aposiopesis is the leaving of something unsaid. Zeugma is the reference of a word to two others, when in strict syntax it can agree with only one of them. Pleonasm is the using of more words than the sense or syntax absolutely requires.

206. *What is a simile? metaphor? allegory? synecdoche?*

A simile is a comparison expressed. A metaphor is a comparison implied; as, "Life is an *isthmus* between two eternities." An allegory is a fictitious story about one thing, which is designed to teach some moral or practical wisdom about another. Synecdoche is the name of a part applied to the whole, or that of the whole applied to a part.

207. *What is antithesis? irony? paralipsis? hyperbole?*

Antithesis is a contrast; as "Virtue ennobles, vice debases." Irony is the sneering use of words with a contrary meaning. Paralipsis is the pretended omission or concealment of what is meant; as, "I will not call him a villain, for it would be unparliamentary." Hyperbole is exaggeration.

208. *What is euphemism? interrogation? exclamation?*

Euphemism is a softened mode of speech for what would be disagreeable or offensive if plainly spoken. Interrogation is an appeal in the form of a question to strengthen a statement. Exclamation is an abrupt mode of speech, designed to express more strongly the emotions of the speaker.

209. *What is versification? verse?*

Versification is the art of making verse. Verse is the musical arrangement of words, according to some regular accent.

210. *What is a foot?*

A foot is two or more syllables, constituting a part of a line or verse.

211. *What is rhyme? blank verse?*

Rhyme is the similarity of sounds between the endings of poetic lines. Blank verse is verse without rhyme.

212. *What is a couplet? a stanza?*

A couplet is two poetic lines, usually rhyming together. A stanza is a regular division of a poem, and consists of three or more poetic lines with complete rhymes.

QUESTIONS AND ANSWERS

ON

LETTER WRITING.

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1. *What five important things are to be considered in writing a letter?*

The heading, the introduction, the body of the letter, the conclusion, and the superscription.

2. *Of what does the heading consist?*

Of the name of the place at which the letter is written, and the date.

3. *What important things should be considered in giving the name of the place?*

If in a city, the name of the street and door number of the residence should be given. If at a hotel, school, or well-known institution, the name should be given. If in a village, or country place, the post-office address, the name of the county and State.

4. *Of what does the date consist?*

The name of the month, the day of the month, and the year.

5. *How should the heading be written?*

Begin about an inch and a half from the top of the page, on the first ruled line of commercial note, a little to the left of the middle. If the heading occupies more than one

line, let each line begin a little farther to the right than the other. The day of the month, year, and door number are written in figures.

6. *How should you capitalize and punctuate the heading?*

Each important word begins with a capital letter, each item is set off by the comma, and the whole closes with a period.

7. *Of what does the introduction consist?*

Of the name, the title, and the place of business or residence of the person addressed.

8. *What are the common titles in use, and to whom should they be applied?*

The prefix *Mr.* should be applied to a man's name; *Messrs.* to the names of several men; *Master* to that of a lad; *Miss* to that of a young lady; *Mrs.* to that of a married lady; *Misses* to several young ladies; *Mesdames* to several married or elderly ladies; *Dr.* to a physician; *Rev.* to a clergyman, or *Rev. Mr.*, if name is unknown; *Rev. Dr.* to a Doctor of Divinity, or *Rev.* can be placed before the name and D. D. after it; *His Excellency* to the name of a Governor or Ambassador; *Hon.* to the name of a Cabinet Officer, a Member of Congress, a State Senator, a Judge or Mayor.

9. *What is the most approved form of addressing the President?*

To the President, Executive Mansion, Washington, D. C. The salutation would simply be, *Mr. President.*

10. *If two literary or professional titles are added to a name, in what order should they be written?*

In the order in which they were conferred.

11. *Name the order of some of these common titles.*

A. M., Ph. D., D. D., LL. D. The higher implies the

lower, and great care should be taken to guard against an excessive use of these titles.

12. *How should you express the salutations?*

They vary according to the station of the person addressed, or the degree of intimacy with him. Strangers may be addressed as *Sir*, *Rev. Sir*, *General*, *Madam*, etc.; acquaintances, as *Dear Sir*, *Dear Madam;* friends, as *My dear Sir*, *My dear Madam*, *My dear Jones;* near relatives and dear friends, as *My dear Wife*, *My dear Boy*, *Dearest Ellen*, etc.

13. *How do you begin the address of a letter?*

If it is a business letter, on the next line below the heading, at the left side of the page, and, if it contains more than one line, it should be spaced as in the heading. If the letter is of an official character or is written to a friend, the address may be placed at the bottom of the letter.

14. *Where should the salutation begin?*

It should begin a little to the right of the address, unless the address is written below.

15. *How should the salutation be punctuated?*

Every important word should begin with a capital letter, and the whole followed by a comma, or a comma and a dash, as *Dear Sir*,—. The semicolon is generally used instead of the comma.

16. *Where do you begin the body of the letter?*

If the introduction is long, on the same line with the salutation; or below the line if the introduction is short.

17. *How should business letters be composed?*

They should be brief, and the sentences short, concise, and to the point. Repeat nothing, and omit nothing needful.

18. *What should be the character of official letters and formal notes?*

They should be more stately and ceremonious. In formal notes the third person is generally used instead of the first and the second, and there is no introduction, no conclusion, no signature; thus:

Mr. and Mrs. F—
request the pleasure of Mr. H—'s company
at a social gathering
on
Tuesday evening, May 17th,
at 8 o'clock.
25 Kimball Ave., May 5th.

The answer may be couched thus:

Mr. K—
accepts with pleasure
Mr. and Mrs. F—'s kind invitation for
Tuesday evening, May 17th.
Monday morning, May 9th.

19. *How should the conclusion be drawn?*

The conclusion consists of the complimentary close, and the signature. The forms are many and varied, according to the relations of the writer to the person addressed. In letters of friendship use, *Your sincere friend, Yours affectionately, Your loving son* or *daughter*, etc. In business letters, *Yours, Yours truly, Yours respectfully, Very respectfully yours.* In official letters, *I have the honor to be, Sir, your obedient servant; Very respectfully, Your most obedient servant*, etc.

20. *What about the signature?*

It should consist of the Christian name and surname. In signing a letter to a stranger write the Christian name in full. A lady addressing a stranger should prefix to her signature her title, *Mrs.* or *Miss*, placing it within the marks of parenthesis; as, (Miss), unless in her writing she has in-

dicated which of these titles her correspondent is to use in reply.

21. *Where should the first word of the conclusion begin?*

It should begin near the middle of the first line below the body of the letter, and be spaced according to the number of lines occupied, like the heading and address.

22. *What is the superscription?*

The address on the envelope.

23. *How should you address an envelope and stamp it?*

The address should begin just below the middle of the envelope and near the left edge. The spacing should slope to the right as in the heading, and so that the last line will come near the lower right-hand corner. The name and title should occupy the first line; if in a city, the door-number and name of street should be on the second line, the name of the city on the third, and the name of the State on the fourth. In the country the name of the county may be written below the post-office address, or in the lower left-hand corner. Every line should end with a comma except the last, which should be followed by a period. Care should be taken to write plainly and in a straight line. The stamp should be placed in the upper right-hand corner.

A SPECIMEN LETTER.

MILWAUKEE, Wis., April 14, 1887.

Wm. A. Gault, Esq.,
Caldwell,
Wis.

MY DEAR SIR:—Yours of the 10th received. I am surprised to hear of the failure of Mr. B., and will meet you as requested at Mukwonago, on the 18th inst.

Yours respectfully,

JAMES GILMORE.

A SPECIMEN SUPERSCRIPTION.

Stamp.

Mr. Wm. A. Gault,

Caldwell,

Racine Co. *Wisconsin.*

QUESTIONS AND ANSWERS

ON

ORTHOGRAPHY, ORTHOËPY AND PHONOLOGY.

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1. *Of what does Orthography treat?*

It treats of correct spelling, and the nature and power of letters.

2. *Define Orthoëpy.*

The art of correct pronunciation.

3. *What is Phonology?*

The science of uttering the elementary sounds.

4. *What is sound, and how are sounds classified?*

Sound is the sensation produced upon the auditory nerve by vibration of the air or other conducting media. Sounds are classified as tones and noises.

5. *What are tones? What are noises?*

Tones are harmonious sounds which are pleasing to the ear. Noises are sounds without any regularity of production and devoid of the harmony of tones.

6. *What is a letter?*

A character used to represent an elementary sound.

7. *What are elementary sounds?*

Distinct single sounds, by the combination of which all the words of our language are formed.

8. *How many elementary sounds are there in the English language, and how are they divided?*

There are forty-five. They are divided into three classes: vowels, subvocals, and aspirates.

9. *Are all the elementary sounds distinct and true elements of our language?*

Many of them are similarly formed and therefore difficult to distinguish, but they are as near the requirements of a pure articulation as phonetists have been able to devise.

10. *How are these sounds produced?*

By the organs of speech, with the breath.

11. *What are the organs of speech?*

The principal ones are the lips, teeth, tongue, palate, and nasal passages.

12. *How is voice produced?*

By the action of the breath on the larynx.

13. *What are the organs of voice?*

They are the lungs, diaphragm, intercostal muscles, bronchi and trachea, larynx and pharynx.

14. *What is the difference between voice and speech?*

Voice is tone produced by the action of the breath on the larynx, while speech is the modulation of the voice to express thought, and may be uttered in a whisper.

15. *What are the vocal chords?*

They are the special vocal apparatus, and consist of two ligaments or bands of fibrous tissue situated within the larynx.

16. *What peculiar formation has the tongue?*

It consists of a mass of muscular fibres so arranged as to admit of motion in every direction or several directions at once.

17. *Describe the palate.*

The palate is the roof of the mouth continuing backward, where it becomes a yielding, muscular, membraneous awning, separating the mouth proper from the nasal passages and the upper part of the pharynx.

18. *What connection has the ear with the voice?*

The ear receives the productions of the voice, and by the communication of the auditory nerves with the brain they are understood.

19. *How is speech produced?*

By the action of the diaphragm and other muscles the breath is forced from the lungs through the bronchi and trachea into the larynx, where it comes into contact with the vocal chords, which, being called into action, produce a vibration, and by the resonating of the pharynx and other cavities is communicated to the external air, falling at length as a tone upon the listening ear.

20. *How are the letters divided?*

Into vowels and consonants.

21. *What are vowels?*

Vowels are letters that denote pure tones.

22. *What are consonants?*

Consonants are letters that represent the subvocal or aspirate sounds.

23. *How are the consonants divided?*

Into single letters and combinations, mutes and semivowels, subvocals and aspirates.

24. *What is a mute?*

A letter which admits of no escape of breath while the organs of speech are in contact.

25. *Name the mutes.*

The mutes are *b*, *p*, *d*, *t*, *k*, *c*, and *g* hard.

26. *What is a semivowel?*

A letter which, in pronouncing, admits of an escape of breath. The semivowels include all the consonants except the mutes.*

27. *What divisions are formed from the semivowels?*

Four of the semivowels, *l*, *m*, *n*, *r*, are called liquids because of their soft sound, which easily unites with the sounds of other letters; two of them, *m* and *n*, and one of the combinations, *ng*, are called nasals; *s* and *z* are called sibilants, or hissing letters.

28. *What are subvocals?*

Those consonants which produce an undertone of voice when their sounds are uttered.

29. *Name them.*

The subvocals are *b*, *d*, *g*, *j*, *l*, *m*, *n*, *r*, *v*, *w*, *y*, *z*, *th*, *zh*, and *ng*.

30. *What are aspirates?*

The aspirates are mere whispers made by the organs of speech and breath, and are *c*, *f*, *h*, *k*, *p*, *s*, *t*, *x*, *th*, *ch*, *sh*, and *wh*.

31. *Name the combinations of the consonants.*

They are *th* aspirate, *th* subvocal, *ch*, *sh*, *zh*, *wh*, and *ng*.

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* The difference between the mutes and semivowels is that the organs of speech are more closely united in pronouncing the mutes than the semivowels.

32. *According to their formation, into what classes are the consonant sounds divided?*

Four: *labials*, *dentals*, *linguals*, and *palatals*.

33. *How are the labials formed?*

By the lips; as *b*, *f*, *m*, *p*, *v*, *w*, and *wh*. The lips are assisted by the teeth in making the sounds of *f* and *v*.

34. *How are the dentals formed?*

Through the teeth; as *j*, *s*, *z*, *ch*, *sh*, *zh*, and *c* and *g* soft.

35. *How are the linguals formed?*

By the tongue, and are *d*, *l*, *n*, *r*, *t*, *y*, *th* aspirate, and *th* subvocal.

36. *How are the palatals formed?*

By the palate; as *k*, *q*, *x*, *ng*, and *c* and *g* hard.

37. *Why is the letter* h *not included in these divisions?*

As the sound is formed by emitting the breath suddenly with all the organs open, it does not properly belong to these divisions, since the organs of speech are not brought into action.

38. *What are cognates?*

Letters whose elements are produced by the same organs in a similar manner; as *f* and *v*. The aspirates (except *h*) are all cognates of some of the subvocals.

39. *How do we analyze words?*

By taking each letter separately, stating whether it is a vowel or consonant; if a vowel, what its sound is; if a consonant, to what divisions it belongs.

40. *How is* th *aspirate distinguished from* th *subvocal?*

To distinguish *th* subvocal from *th* aspirate, a dash is placed beneath the subvocal.

41. *How are the elementary sounds divided?*

There are twenty vowel sounds, fifteen subvocals, and ten aspirates.

42. *How many sounds have the vowels?*

Forty-five, classified as follows:

20 vowel sounds:
ā, ă, â, ä, à, ạ, as in ale, add, air, arm, ark, all.
ē, ĕ, ẽ, as in eve, end, verge.
ī, ĭ, as in ice, ill.
ō, ŏ, as in old, odd.
o͞o, o͝o, as in moon, wool.
ū, ŭ, û, as in use, up, urge.
ou, as in out.
oi, as in oil.

25 consonant sounds:
Subvocals:
b, d, g, j, l, as in bet, dot, get, jet, lid.
m, n, *n*, r, *th*, as in mit, not, finger, rat, that.
v, w, y, z, zh, as in vat, woe, yet, buzz, azure.
Aspirates:
p, t, k, h, as in pet, tin, kit, hat.
ch, th, f, wh, as in chin, thin, fat, when.
s, sh, as in sin, shot.

43. *According to this classification of elementary sounds, how many letters would be required to form a full alphabet?*

Forty-five.

44. *How is this deficiency filled?*

By giving to some letters more than one sound. These sounds are represented by marks or symbols.

45. *What names are given to the symbols which represent the different sounds?*

Vowel marks:
The Macron ¯
The Breve ˘
The Circumflex ^
The Tilde, or Wave ~
Two Dots ¨
One Dot ·

Consonant marks. { The Bar –
The Dotted Bar ˙
The Cedilla ¸

46. *Of all the elementary sounds, which represent the purest product of the human voice?*

The *Italian a*, as in *ah.*

47. *What can be said of all other vocals and subvocals?*

They are considered modifications of this tone, as they require some portion of it.

48. *What is a diphthong?*

A union of two vowel sounds in the same syllable.

49. *How many diphthongs are there?*

Four: *ou, ow, oi, oy.*

50. *How many sounds are represented by these diphthongs?*

Two: *ou* and *ow* represent the same sound, and are called *inseparable diphthongs*, because they cannot be separated into two distinct vowel sounds; *oi* and *oy* represent one sound, and are called *separable diphthongs*, because their sounds can be separated into broad *a* and short *i*. To test the separable diphthongs, spell by sound the words oil and boy, using broad *a* and short *i* in each, and pronounce in quick succession.

51. *What is a digraph? What is a triphthong?*

A digraph is the union of two vowels in the same syllable, one of which is silent. A triphthong is the union of three vowels in the same syllable, two of which are silent.

52. *What are the elements of which orthoëpy treats?*

Articulation, syllabication and accent.

53. *What is a syllable?*

A letter or combination of letters, uttered by one emission of the voice.

54. *What is a word?*

A syllable or combination of syllables representing some thought or idea.

55. *What are words of one, two, three, four or more syllables called?*

Monosyllables, dissyllables, trisyllables and polysyllables.

56. *What is essential in every syllable?*

A vowel.

57. *By what is the principal sound in every syllable produced?*

By the vowel, except in unaccented syllables with *e* as the vowel sound.

58. *To what does every consonant belong?*

To some vowel or diphthong, unless it be silent.

59. *When is a consonant antecedent or consequent to a vowel?*

When it precedes the vowel in the same syllable it is antecedent to it; when it follows in the same syllable it is consequent to it.

60. *What is syllabication?*

Dividing words into syllables.

61. *What is the guide for arranging words into syllables?*

They must be arranged exactly as they are heard in correct pronunciation.

62. *How may a word be divided at the end of a line?*

Between the syllables.

63. *Why are words divided into syllables?*

To assist in their pronunciation.

64. *When is the hyphen used?*

Between compound words when first formed or when

little used; between syllables and the ends of lines; and between syllables for the purpose of instruction.

65. *When two vowels come together, how are they disposed of in syllabication?*

Unless they constitute a diphthong they must be treated as two syllables, or they may be used together with one vowel silent.

66. *When is one letter a substitute for another?*

When it has the sound usually represented by another letter.

67. *What properties does a substituted letter assume?*

Those of the letter which it represents.

68. *Which letters have no substitutes?*

B, d, g, h, l, m, n, p, r, th and *wh.*

69. *When is* i *a consonant?*

When it begins a syllable and is immediately followed by a vowel sound; as in *alien.*

70. *Is* u *ever a consonant?*

When it is preceded by *g* or *s*, and immediately followed by a vowel sound, it is a consonant and a substitute for *w;* as in *language.*

71. *When is* q *a vowel? Is* w *ever a vowel?*

When it represents the sound of *i.* Formerly *w* was called a vowel when it represented the sound of *u*, but as it cannot form a syllable either alone or in connection with consonants, as all the other vowels do, it is proper to deny it the name of a vowel.

72. *What is the use of silent letters?*

To modify the sounds of other letters.

73. *Which letters are never silent?*

f, j, q, r, x, v, z.

74. *Which letters have no sound of their own?*

C, *x* and *q*.

RULES FOR SILENT LETTERS.

75. *When is* e *final silent?*

When another vowel precedes it in the same syllable; as in *made*, *grape*, *ice*, *bride*.

76. *What would be the result if* e *final were not silent?*

Two syllables would be formed for one.

77. *When is* b *silent?*

Before *t* or after *m* in the same syllable; as in *comb*, *tomb*, *debt*, *subtle*.

78. *When is* c *silent?*

Before *k* in the same syllable; as in *back*, *rack*, *luck*. It is also silent in *czar*, *indict*, *muscle*, *victuals*, and a few others.

79. *When is* d *silent?*

Before *g* in the same syllable; as in *bridge*, *pledge*.

80. *When is* g *silent?*

Before *m* or *n* in the same syllable; as in *phlegm*, *gnat*, *malign*, *design*.

81. *When is* h *silent?*

After *g* or *r* in the same syllable; as in *ghost*, *rhyme*, *rheumatism;* when it is final, following a vowel, as in *oh*, *ah*. *Jehovah;* when it is initial in a few words, as in *herb*, *heir*, *honest*, *hour;* and in *asthma*, *phthisis*, *isthmus*, *Thomas*, *Thames*, it follows *t* and is silent.

82. *When is* k *silent?*

Before *n* in the same syllable; as in *knife*, *knee*.

83. *When is* l *silent?*

After *a* when followed by *f*, *m*, *k* or *v*, in the same

syllable (except *valve*); as in *folks, half, palm, stalk, salve.* *L* is silent also in *could, would* and *should.*

84. *When is* n *silent?*

After *l* and *m;* as in *kiln, solemn.*

85. *When is* p *silent?*

When it is initial and before *n, s,* or *t;* as in *psalm, pneumonia, psalter.*

86. *When is* t *silent?*

Before *ch* in the same syllable; as in *notch, latch.* It is silent also in *Christmas, eclat, mortgage,* and a few other words.

87. *When is* w *silent?*

Before *r* in the same syllable; as in *wrap* and *wreck;* and also in *whole, sword, whoop, answer* and *two.*

88. *When is* gh *silent?*

After *i* in the same syllable; as in *fright* and *neigh.* After *au* and *ou;* as in *aught, ought, bought, slaughter* and *through.*

89. *In what words is* ch *silent?*

In *yacht, schism* and *drachm.*

90. *In what words is* s *silent?*

In *corps, isle, island, puisne, viscount* and *belles-lettres.*

91. *Is* m *ever silent?*

In the word *mnemonic* or *Mnemon.*

92. *In how many ways are words designated?*

First, as simple or compound; second, as primitive or derivative.

93. *What is a simple word? What is a compound word?*

One that is not composed of two or more whole words; a compound word is composed of two or more simple ones.

94. *What is a primitive word?*

One that is derived from no other word.

95. *What is a derivative word?*

One formed from a primitive by means of prefixes or suffixes.

96. *What is a prefix? What is a suffix? What is a root?*

A prefix is a letter or letters joined to the beginning of a word; at the end of a word the addition is called a suffix; the root is the chief word without prefix or suffix.

97. *Under what circumstances is a word primitive which is formed by the addition of prefixes or suffixes?*

Whenever the meaning of the word is radically changed by the addition of prefixes or suffixes; as in *reproof*, in which the meaning of neither *re* or *proof* is retained.

In forming derivatives by means of suffixes, something more is required than merely to write the parts together as one word. Thus, if we desire to affix the suffix *ed* to the word *suffer*, we have only to unite, without change, the suffix with the radical, making *suffered*. But with the word *prefer*, a change must be made by doubling the final *r;* thus *preferred*. This and other like changes are made, for the most part, in strict accordance with known rules. These rules should be committed to memory by repeated illustrations in order to understand when and how to apply them.

98. *Give the general rules for spelling.*

RULES FOR SPELLING.

RULE I. — The final *e* of a radical word is rejected when the suffix begins with a vowel, except words ending in *ce* or *ge;* as, moving, salable, pleasure, peaceable, courageous.

RULE II. — The final *e* of a radical word is generally retained when the suffix begins with a consonant; as, hopeless, movement. In abridge, acknowledge, argue, awe, due, judge, lodge, true and whole, silent *e* is not retained.

RULE III. — Monosyllables and words accented on the last syllable, when they end with a single consonant preceded by a single vowel, double their final consonants before a suffix that begins with a vowel; as, baggage, spotted, beginner.

RULE IV. — The final consonant, when not preceded by a single vowel, or when the word is not accented on the last syllable, remains single upon the addition of a suffix; as, spoiling, suffered, toiling, visiting.

RULE V. — The final *y* of a radical word, when preceded by a consonant, is generally changed into *i* upon the addition of a suffix; as happiness, trial, stories. In a few instances *y* is changed into *e* before *ous* and its compounds; as, beauteous, beauteously.

RULE VI. — The final *i* of a radical word is omitted when the suffix begins with *i;* as, alkali, alkalize.

RULE VII. — The final *y* of a radical word when preceded by a vowel, or when the suffix begins with *i*, remains unchanged; as, buyer, glorying.

RULE VIII. — Words ending in *f* or *fe* commonly change *f* into *v* when a suffix is added beginning with a vowel; as, wives, mischievous.

RULE IX. — Words ending in *le*, preceded by a consonant, drop these letters on receiving the suffix *ly;* as, ably, idly.

RULE X. — Words ending in *ble*, before the suffixes *ity* and *ities*, take *i* between the letters *b* and *l;* as, ability, abilities.

RULE XI. — Words ending in *er* or *or* often drop the *e* or *o* before a suffix beginning with a vowel; as, victrix, wondrous.

RULE XII. — Monosyllables ending in *f*, *l* or *s*, preceded by a single vowel, double the final consonant; as staff, spell, mill — except *if*, *of*, *as*, *gas*, *has*, *was*, *yes*, *is*, *his*, *this*, *us*, *thus*.

RULE XIII. — Words ending in any other consonants

than *f*, *l* or *s* do not double the final letter — except *add*, *odd*, *ebb*, *egg*, *inn*, *err*, *purr*, *butt*, *buzz*, *fuzz*.

The following is a list of prefixes, with their significations:

A signifies on, in, at, to; as, abroad, abed, avert.

AB signifies from; as, absolve, to free from.

AD, AC, AF, AG, AL, AN, AP, AR, AT, signify to; as —

Adjoin, to join to;
Accredit, to give credit to;
Affix, to fix to;
Agglutinate, sticking to;
Allure, entice to;
Annex, join to;
Append, hang to;
Arrange, range to;
Attune, tune to.

ALL, AL, WHOLLY; as —

All just, wholly just.
Already, wholly, or completely ready.
All, when not separated from the radical by a hyphen, rejects one *l*.

ANTI, ANT, signify against; as —

Antipathy, a feeling against.
Antarctic, opposite to the arctic.

ANTE signifies before; as, antecedent, going before.

BE signifies near; as, beside, near, or by the side of.

BI signifies two; as, bifold, twofold.

CIRCUM signifies around; as, circumnavigate, to sail around.

CON, COM, CO, COL, COR, signify with; as —

Conjoin, to join with;
Commix, to mix with;
Coequal, equal with;
Collect, to place with or together;
Correlative, relating with.

CONTRA, COUNTER, signify opposite; as —

Contradance, a dance opposite;
Counterview, a view opposite.

DE signifies from; as, depart, to part from.

DEMI signifies half; as, demi-wolf, half-wolf.

DIA signifies through; as, diameter, the measure through.

DI, DIS, signify two; as —
Ditone, an interval of two tones;
Dissyllable, a word of two syllables;

DIS also signifies not or un; as, dissimilar, not similar, disband, unband.

E, EX, EC, EF, signify out; as —
Emigrate, to move out;
Export, to carry out of port;
Eccentric, out of, or deviating from the centre;
Effluent, flowing out.

EXTRA signifies beyond; as, extravagant, going beyond.

EQUI signifies equal; as, equidistant, at an equal distance.

EN, EM, signify in; as —
Enclose, to close in;
Embroil, to put in a broil or tumult.

EU signifies well or agreeable; as, euphony, agreeable sound.

HEX signifies six; as, hexangular, six angles.

HYPER signifies over; as, hypercritical, over-critical.

IN, IM, IG, IL, IR, signify not or in; as —
Incomplete, not complete;
Imprudent, not prudent;
Illegible, that can not be read;
Ignoble, not noble;
Irregular, not regular.

INTRO signifies within; as, introspection, looking within.

INTER signifies between; as, intervene, to come between.

JUXTA signifies next; as, juxtaposition, the place next.

MAL signifies bad; as, malpractice, bad practice.

MIS signifies wrong; as, misguide, to guide wrong.

MONO signifies one; as monosyllable, one syllable.
MULTI signifies many; as, multiform, having many forms.
NON signifies not; as, non-essential, not essential.
OCT signifies eight; as, octangular, eight-angled.
OMNI signifies all; as, omnipotent, all-powerful.
OUT signifies beyond; as, outrun, to run beyond.
OVER signifies above; as, overshoot, to shoot over.
OVI signifies an egg; as, oviform, egg-shaped.
PER signifies by; as, perchance, by chance.
PERI signifies around; as, perimeter, the measure around.
PAR, PARA, signify from; as —
Parody, an ode or song which is an alteration from another;
Parasol, a small canopy to shield from the sun.
PEN signifies almost; as, peninsula, almost an island.
PLENI signifies full; as plenipotent, full of power.
POLY signifies many; as, polysyllabic, having many syllables.
POST signifies after; as, postpone, to place after or put off.
PRE signifies before; as, prejudge, to judge beforehand.
PRETER signifies beyond; as, preternatural, beyond the natural.
PRO signifies for; as, pronoun, for a noun.
PROTO signifies first; as, protomartyr, the first martyr.
QUAD signifies four; as, quadrangle, four-angled.
RE signifies again; as, review, to view again.
RECT, RECTI, signify right or straight, as —
Rectangle, right angle;
Rectilinear, straight-lined.
RETRO signifies back; as, retrograde, to go backwards.
SEMI, DEMI, HEMI, signify half; as —
Semicircle, half a circle;
Demitone, half a tone;
Hemisphere, half a sphere.
STEREO signifies solid; as, stereotype, solid type.

SUB, SUC, SUF, SUG, SUP, SUBTER, signify under; as —

Subcommittee, under committee;

Succeed, to follow after;

Suffix, to fix after;

Suggest, to put under notice;

Suppress, to press under;

Subterfluous, flowing under.

SUPER, SUR, signify over or more; as —

Superhuman, more than human;

Surcharge, overcharge.

SUS signifies up; as, sustain, to hold up.

SE signifies apart; as, secede, to go apart.

SINE signifies without; as, sine die, without a day.

SYM signifies with; as, sympathy, with feeling.

TRANS signifies across; as, transatlantic, across the Atlantic.

ULTRA signifies beyond; as, ultramontane, beyond the mountains.

UN signifies not; as, unwise, not wise.

WITH signifies against; as, withstand, to stand against.

The following table contains the simple suffixes with their definitions, and words to illustrate them. For want of space a full analysis of the words cannot be given, but the student can supply the want by giving a complete definition of the suffixes and primitive words combined.

(*a*) *Ize*, *tize*, *ze*, *ise*, *se*, *ish*, *fy*, *ify*, *en*, *e*, *ate*, *iate*, *uate*, *cate*, *icate*, *ite*, signify to make, to give, to put upon or into; as civilize, stigmatize, glaze, criticise, cleanse, establish, satisfy, justify, soften, breathe, maturate, ampliate, actuate, implicate, duplicate, unite.

(*b*) *Ing*, *ant*, *ent*, *ient*, signify continuing; as, watering, dormant, pendent, sufficient.

(*c*) *Ed* signifies did; as, preferred, did prefer.

(*d*) *Ate*, *ite*, *en*, signify made, made of or like, possessed of; as, globate, erudite, silken.

(*e*) *Ant*, *ent*, *ate*, *ite*, *ast*, *ist*, *ado*, *ard*, *on*, *oso*, *ar*, *ary*, *iary*,

er, *ee*, *eer*, *ier*, *or*, *ive*, *ster*, *ner*, *yer*, *zen*, *isan*, *an*, *ian*, *tain*, signify one, who, a person; as, servant, president, collegiate, favorite, encomiast, botanist, desperado, dotard, glutton, virtuoso, beggar, adversary, incendiary, payer, payee, charioteer, cannonier, executor, executive, teamster, partner, lawyer, citizen, artisan, veteran, grammarian, chieftain.

(*f*) *Ess*, *ix*, *ine*, *ago*, signify a female; as, lioness, mediatrix, heroine, virago.

(*g*) *Ity*, *ety*, *ty*, *cy*, *ce*, *ice*, *ude*, *tude*, *itude*, *ness*, *t*, *th*, *mony*, signify the quality or state of being, the thing which or that which; as, publicity, variety, novelty, privacy, opulence, justice, quietude, plentitude, exactitude, meekness, restraint, truth, sanctimony.

(*h*) *Ion*, *ment*, *ament*, *iment*, *ure*, *ture*, *ature*, *iture*, *al*, *ade*, signify the act of; that which; as, erection, ejectment, armament, impediment, pressure, mixture, signature, expenditure, refusal, cannonade.

(*i*) *Al*, *eal*, *ial*, *ual*, *ern*, *urn*, *iac*, *ic*, *tic*, *atic*, *etic*, *id*, *an*, *ean*, *ian*, *ane*, *ine*, *ile*, *eth*, *th*, *ar*, *ary*, *iary*, *uary*, signify pertaining, belonging, or relating to; as, central, corporeal, dictatorial, habitual, southern, taciturn, demoniac, patriotic, dyspeptic, emblematic, dietetic, stupid, Roman, marmorean, Newtonian, mundane, crystalline, infantile, fortieth, tenth, columnar, missionary, stipendiary, sumptuary.

(*j*) *Ose*, *ous*, *eous*, *ious*, *uous*, *ceous*, *aceous*, *aneous*, *oneous*, *itious*, *ful*, *ey*, *y*, signify full of, abounding in, having the nature or quality of; as, verbose, mountainous, righteous, robustious, tempestuous, cetaceous, lardaceous, instantaneous, erroneous, cementitious, hopeful, clayey, juicy.

(*k*) *Kin*, *ling*, *ule*, *cule*, *cle*, *icle*, *ock*, *et*, *let*, *aster*, signify little, small, minute, slight, petty; as, lambkin, kingling, globule, animalcule, tubercle, particle, hillock, feveret, ringlet, poetaster.

(*l*) *Ics* signifies the doctrine, art or science of; as, optics.

(*m*) *Ism* signifies that which is peculiar to; a doctrine; a state, or condition; as, savagism, Calvinism.

(*n*) *Er* signifies more; as, wiser, more wise.

(*o*) *Est* signifies most; as, wisest, most wise.

(*p*) *Dom, ric, ate, hood, ship, age, cy, ry,* signify the state, rank, office of, or the territory of jurisdiction of; as, Popedom, bishopric, electorate, childhood, township, peerage, captaincy, chieftainry.

(*q*) *Y, ry, ary, ery, ory,* signify the art, practice, or business of, or the place where; as gluttony, bigotry, statuary, cookery, armory.

99. *After ascertaining the syllabication of a word, what is to be observed?*

The location of the accent.

100. *When two accents occur in the same word, which usually precedes the other?*

The secondary nearly always precedes the primary.

101. *Do words ever have more than two accents?*

Some very long words have two secondary accents.

102. *What is the rule for accent of a word of two syllables?*

With the exception of *amen*, they never have more than one accent.

103. *What is the rule with compound words?*

Each part retains its own accent, the same as two distinct words.

104. *What is the rule where words change their parts of speech from verbs to nouns or adjectives?*

When used as verbs the accent is usually on the last syllable, but when used as nouns or adjectives, on the first syllable.

105. *Where is the accent when words end in* sion *or* tion?

The accent is on the penult, or syllable next to the last.

106. *Words ending in* ical *or* acal *place the accent on what syllable?*

Generally on the syllable next preceding this termination.

107. *What is a* final *letter?*

The last in a word.

108. *What is the* power *of a letter?*

The elementary sound which it represents.

109. *What does the difference of accent sometimes do?*

It changes the meaning of the word; as, *Au'gust*, the eighth month; *august'*, grand, majestic.

110. *Name the kinds of spelling.*

There are three kinds: phonic, oral and written.

111. *What is phonetic spelling?*

Spelling by sound.

EXERCISES IN ABBREVIATIONS USED IN WRITING.

Write out in full:	*Abbreviate:*
A. A. S.	In the year of our Lord.
G. C. B.	Member of Congress.
C. P. S.	Before Christ.
Nom. No.	Keeper of the Seal.
I. H. S.	Justice of the Peace.
A. B. or B. A.	House of Representatives.
Col. Coll.	As if he would say.
Min. Plen.	Blessed Virgin.
N. J. N. H.	In the same place.
Q. E. F.	No one dissenting.
Qr. Qt.	Which was to be demonstrated.
Rt. Rev.	A sufficient quantity.
S. A. R. R.	For the time being.
Sec. Leg.	Doctor of Divinity.

Write out in full:	*Abbreviate:*
V. P. vs.	Superintendent.
Nov. N. S.	New Testament.
Do. or Ditto.	A hundred-weight.
H. B. M.	District of Columbia.
M. B. M. D.	Bachelor of Divinity.
Acct. A. B. S.	And so forth.
E. J. e. g.	See; refer to.
U. T. Vt.	United States Navy.
C. S. A. Yd.	The last, or last month.
S. E. N. W.	West Indies.
Zool. Pwt.	By the hundred.
N. T. N. Y.	Attorney.
Ill. Ind.	Unknown.
A. M. Md.	Manuscripts.
M. P. Neb.	Doctor of Laws.
Co. Am.	Love of learning.
Com. Feb.	Right Honorable.
Wm. Wt.	Old Testament.
Wis. Vt.	To-wit; namely.
O. S. Oct.	Postmaster; afternoon.
P. O. Pop.	Take notice.
U. S. A. Viz.	Rhode Island.
P. pp. Oz.	Parliament.
Va. V. Wed.	Gentlemen; Sirs.
N. E. Ky. Kans.	Fellow of the Royal Society.
Feb. Fahr. Cal.	Professor; President.
G. B. N. C. Neh.	Texas; Territory.
Tim. Sp. Sam.	Postscript; Regiment.
Rep. Rev. S.	Mademoiselle; Major.
La. lbs. Fem.	Italy; Hundred; Dozen.
Id. i. e. Gen.	Fellow of the Society of Arts.
Mt. N. A. Miss.	Assistant; Junior.
Hhd. Hist. Gov.	Cash on delivery.
Hdkf. Cr. Dft.	Thursday; Schooner.

Write out in full:	*Abbreviate:*
4to. LL. D. 8vo.	Volume; Philadelphia.
Sat. S. C. W.	Geology; Louisiana.
Inst. Int. Io.	Place of the Seal.
Dist. Dict. Cyc.	Meridian; Thousand.
Long. L. Lat.	Legislature; Lieutenant.
Minn. Mad. Masc.	Long Island; Matthew.
Gent. Fur. Ft.	Executor; Barrel; Adverb.
Jam. Inter. Dr.	Mistress; Servant; Democrat.
Conj. Agt. Al.	Alderman; Amount; Editor.
E. Deut. Dea.	Esquire; Geometry; History.
Hon. Gr. U. S.	Constable; Constitution.
Cor. Adj. Anon.	Chapter; Capitals; Avenue.
Capt. Chron. C.	Mexico; Michigan; Minnesota.
N. Myth. Mo.	Memorandum; Maine.

QUESTIONS AND ANSWERS

ON

WRITTEN ARITHMETIC.

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1. *What is mathematics?*

The science of quantity.

2. *What is quantity?*

Anything that can be increased, diminished or measured.

3. *Define arithmetic as a* science *and as an* art.

As a science, it logically investigates and philosophically classifies and arranges the principles and rules of the subject; as an art, it applies these principles.

4. *Upon what is arithmetic founded, and how are its operations carried on?*

It is founded on notation, and its operations are carried on by means of addition, subtraction, multiplication and division.

5. *What is arithmetical language?*

The method of expressing numbers. It is of two kinds, oral and written.

6. *What is a unit?*

One, or a single thing.

7. *What is a number? The power of a number? A root?*

A number is a unit, or a collection of units. The power

of a number is the product produced by repeating a number so many times as a factor. A root is a factor repeated to produce power.

8. *What is an integer?*

A whole number.

9. *What is the difference between an abstract number and a concrete number?*

An abstract number is one used without reference to any particular thing. A concrete number is one that has reference to a particular thing.

10. *What is a sign?*

A sign is a character indicating an operation to be performed.

11. *What is the sign of aggregation?*

The sign of aggregation is a parenthesis, or bar, which shows that the numbers enclosed by it are to be considered together, subject to the same operation.

12. *What is a rule? A problem? An axiom?*

A rule is a prescribed method of performing an operation. A problem is a question or proposition to be solved. An axiom is any truth which is self-evident.

13. *What is analysis in arithmetic?*

The process of investigating principles, and solving problems, independently of set rules.

14. *What is notation?*

Notation is a method of writing or expressing numbers by characters.

15. *What is numeration?*

Numeration is a method of reading numbers expressed by characters.

16. *How many systems of notation are in general use?*

Two: the Roman and the Arabic.

17. *Upon what is the Roman notation founded?*

Upon five principles: first, repeating a letter repeats its value; second, if a letter of any value is placed after one of greater value, it is added to the greater; third, if a letter of any value is placed before a greater, it is to be taken from the greater; fourth, if a letter of any value is placed between letters of higher value, it is to be taken from their united values; fifth, if a bar or dash is placed over a letter, it increases its value a thousandfold.

18. *In how many ways may numbers be written?*

In words, letters, and figures.

19. *In the Arabic system of notation numbers are expressed according to what principle?*

According to the positions of the nine characters.

20. *Why is the Arabic system of notation also called the decimal system?*

Because of its increase and decrease in a tenfold ratio, from *decem*, a Latin word meaning ten.

21. *What is the difference between the simple and local value of a figure?*

The simple value of a figure is its value when taken alone, while the local value depends upon the place it occupies with other figures.

22. *What is the fundamental synthetic process of arithmetic?*

Addition, for by it we pass from unity to plurality; from the one to the many.

23. *Give the principles of addition.*

Only similar numbers can be added. The sum is a number similar to the numbers added. The sum is the same in whatever order the numbers are added.

24. *What are the cases in, or modes of addition?*

Mental addition and written addition.

25. *Why do we write the numbers as suggested by the arithmethics, and why do we begin at the right hand to add?*

Merely for convenience.

26. *What is the fundamental analytical process of arithmetic?*

Subtraction.

27. *Give the principles of subtraction?*

Similar numbers, only, can be subtracted. The difference is a number similar to the numbers subtracted. If the two numbers are equally increased or diminished the remainder will be the same. If the first number is equal to the sum of the second and the remainder, then the second must equal the difference between the first and the remainder.

28. *Name and define the cases in subtraction?*

One is expressed in the Arabic system, the other by some mental calculation.

29. *Name the principles of multiplication.*

The multiplier is always an abstract number. The product of two numbers is the same, whichever is made the multiplier. If the multiplicand be multiplied by all of the parts of the multiplier, the sum of all the partial products will be the true product. The multiplicand equals the quotient of the product divided by the multiplier; the multiplier equals the quotient of the product divided by the multiplicand.

30. *Why are the multiplicand and multiplier taken together called factors?*

Because they make the product.

31. *What are the* terms *of division?*

The dividend, divisor and quotient.

32. *Upon what does the quotient depend?*

Upon both dividend and divisor.

33. *Show* how *the* value *of the quotient depends on the relation of dividend and divisor.*

If one of these terms is changed it changes the quotient, but if both are changed alike the changes neutralize each other and the quotient remains the same.

34. *What principles of division are deduced from these relations?*

Multiplying the dividend or dividing the divisor by any number multiplies the quotient by that number. Dividing the dividend or multiplying the divisor by any number divides the quotient by that number. Multiplying or dividing both dividend and divisor by the same number does not change the quotient.

35. *In division, what relation exists in regard to the quality of abstractness and concreteness?*

The quotient may be either abstract or concrete. It will be abstract when the dividend and divisor are both abstract, or both concrete. It will be concrete when the dividend is concrete and the divisor abstract. Either the divisor or quotient must always be an abstract number. An abstract number cannot be divided by a concrete number.

36. *How are numbers classified?*

As even and odd; prime and composite; integral and fractional; abstract and concrete; simple and compound; like and unlike.

37. *What are the minuend and subtrahend?*

The minuend is the number subtracted from; the subtrahend is the number subtracted.

38. *What is a composite number?*

One that can be produced by multiplying two or more numbers together.

39. *What is factoring?*

The process of separating numbers into factors.

40. *What are the component factors of a number?*

The several numbers which, being multiplied together, produce the number.

41. *What are the powers of a number?*

The first power is the number itself, or the root. The second power, or square, is the number multiplied by itself. The third power, or cube, is the product arising from using the number three times as a factor.

42. *What is the reciprocal of a number?*

It is 1 divided by that number.

43. *How do we find the true remainder by dividing by factors?*

Multiply each partial remainder, except the first, by all the preceding divisors, and add these products to the first remainder. It will be noticed that after the first division the remainder cannot be of the same denomination as the first number divided; and as each succeeding division increases the value of the remainders, each remainder must be multiplied by all the preceding divisors to reduce it to its former denomination.

44. *What is a prime number? When are numbers prime to each other?*

One which cannot be resolved into factors. Numbers are prime to each other when they have no common divisor.

45. *What are a common divisor, and the greatest common divisor?*

One which will divide two or more numbers without a remainder. The greatest common divisor is the greatest

number that will divide two or more numbers without a remainder.

46. *What are a multiple, a common multiple, and the least common multiple?*

A multiple is a number exactly divisible by a given number. A common multiple is one exactly divisible by two or more numbers. The least common multiple is the least number that is exactly divisible by two or more given numbers.

47. *What are fractions?*

Parts of a unit.

48. *What is the value of a fraction?*

The quotient of the numerator divided by the denominator.

49. *What do the numerator and the denominator respectively show?*

The denominator shows into how many parts a number is divided; the numerator shows how many parts are taken.

50. *What are a proper fraction, an improper fraction, a mixed fraction and a complex fraction?*

A proper fraction is one whose numerator is smaller than its denominator. An improper fraction is one whose numerator is equal to or greater than its denominator. A mixed number is one expressed by an integer and fraction written together. A complex fraction is one that has a fraction in its numerator, or in its denominator, or in both.

51. *Is a fraction a number?*

A fraction is a number of equal parts of unity, and consequently must represent a subdivision of numbers; thus, 5 feet is a number, and the fraction $\frac{5}{12}$ of a foot represents equal numbers of a lower order, as 5 inches.

52. *Is a fraction a denominate number?*

No.

53. *Why do we invert the divisor in division of fractions?*

For convenience; if it is not inverted the fractions must be reduced to a common denominator, and one numerator divided by the other.

54. *How do we find the greatest common divisor of fractions?*

We find the greatest common divisor of the given numerators, and the least common multiple of the denominators.

55. *How do we find the least common multiple of fractions?*

By finding the least common multiple of the numerators, and the greatest common divisor of the denominators.

56. *What are decimal fractions?*

Fractions whose denominators are increased or decreased in tenfold ratio.

57. *What is the first thing to be considered in the treatment of decimals?*

The method of reading and writing them, or their numeration and notation.

58. *What will the denominator of a decimal always be?*

The unit 1 with as many ciphers annexed as are equal to the number of figures in the decimal or numerator.

59. *Upon what does the value of a decimal depend?*

Its distance from the decimal point.

60. *How do decimals increase and decrease?*

They increase from right to left, and decrease from left to right, in a tenfold ratio.

61. *What is a pure decimal?*

A pure decimal consists of a decimal only; for example, .35, which is read, as if written, $\frac{35}{100}$.

62. *What is a mixed decimal?*

One with an integer and a decimal; thus, 15.7.

63. *What is a complex decimal?*

One with a fraction annexed; thus, .005$\frac{3}{4}$.

64. *From what are the* names *of decimal orders derived?*

From the names of the orders of integers.

65. *How can we find the product of two decimals by a contracted multiplication?*

Write the multiplier with the order of its figures reversed, and with units' place under that figure of the multiplicand which is the lowest decimal to be retained in the product. Find the product of each figure of the multiplier by the one above in the multiplicand and those to the left, increasing this multiplication by as many units as would have been carried had the rejected part of the multiplicand been used. Write these partial products with the lowest figure in the same column and add together, pointing off the required number of decimal figures.

66. *How can we find the quotient of one decimal divided by another by a contracted division?*

Compare the left hand figure of the divisor with the units of like order in the dividend, and determine how many figures will be required in the quotient. For the first contracted divisor, take as many figures from the left of the divisor as there are places required in the quotient, and in each following division reject one place from the right of the last preceding divisor, using the remainder for a new dividend.

67. *What is a circulating decimal?*

A decimal in which a figure or set of figures are continually repeating.

68. *What is a repetend?*

The figure or set of figures continually repeated.

69. *What is a continued fraction?*

A fraction whose numerator is 1, and whose denominator is a whole number, plus a fraction whose numerator is also 1, and whose denominator is a similar fraction, etc.

70. *What is the difference between decimal fractions and common fractions?*

The decimal fraction has a denominator understood, showing that a unit is divided into ten equal parts, or subdivided in a tenfold ratio; the second has a denominator expressed, showing that a unit is divided into any number of equal parts.

71. *What is currency?*

The medium of circulation.

72. *From what was the sign $ derived?*

From the initial letters of the *United States*, U.S. joined together as a monogram.

73. *What is an aliquot part of a number?*

Such a part as will exactly divide that number.

74. *What is a bill?*

A written statement of articles bought or sold, together with the price of each and the whole cost.

75. *What is a compound number?*

A concrete number, whose value is expressed in two or more different denominations.

76. *What is a denominate number?*

A concrete number in which the unit of measure is established by law or custom.

77. *What is a simple denominate number?*

A denominate number composed of units of the same denomination; as, 3 feet.

78. *What is a compound denominate number?*

One composed of two or more denominations which are related to each other; as, 3 feet 4 inches.

79. *What is a standard unit?*

A unit of measure from which the other units of the same kind may be derived.

80. *Name the quantities of magnitude which give rise to denominate numbers?*

They are value, weight, length, surface, volume, capacity, angles, time.

81. *What is the standard unit of value?*

Money is the standard measure of value, and in the United States the standard unit is the dollar. In English money the pound sterling is the unit.

82. *What is the standard unit of weight?*

The Troy pound.

83. *What is the standard unit of length?*

The yard.

84. *What is the standard unit of surface?*

The square yard for ordinary measurement, and the acre for land.

85. *What is the standard unit of volume?*

The cubic yard for ordinary measurement, and the cord for wood.

86. *What is the standard unit of capacity?*

The gallon for fluids, and the bushel for dry measure.

87. *What is the standard unit of angles?*

The right angle.

88. *What is the standard unit of time?*

The day. This is determined by the revolution of the earth.

89. *What is a measure?*

That by which extent, dimension, capacity, or amount is ascertained. Measures are of eight kinds: length, surface or area, solidity, weight, time, angles, capacity and money.

90. *How many dimensions has extension?*

Extension has three: length, breadth, and thickness.

91. *Explain how distance is measured by time?*

Every circle is supposed to be divided into 360 equal parts called degrees. As the earth makes its revolution once in 24 hours, the 24 hours must equal 360°, or 1 hour, 15° of distance. By subdividing, we find that 1° would equal 4 minutes, and $\frac{1}{60}$ of a degree would equal 4 seconds.

92. *How do you find the difference in time corresponding to any given difference in longitude?*

Divide the difference in longitude, expressed in degrees, minutes and seconds, by 15, and the respective quotients will be hours, minutes, and seconds.

93. *How do you find the difference in longitude corresponding to any given difference in time?*

Multiply the difference in time, expressed in hours, minutes and seconds, by 15, and its respective products will be degrees, minutes and seconds of longitude.

94. *How do you find the time at one place, when the time at another place and the difference of these places in time are known?*

When the second place is east of the first, add their difference of time; when it is west of the first, subtract their difference of time.

95. *How do navigators determine their longitude at sea?*

Taking with them a chronometer set to mark the time at a given place — as Greenwich or Washington — they ascertain by observation of the sun with the sextant the time at the place they are in, reduce the difference of time to the difference of longitude, and thus ascertain that they are so many degrees east or west of the meridian of the place for which the chronometer is set.

96. *What is a scale?*

A series of numbers, descending or ascending, used in operations upon compound numbers.

97. *What is weight?*

A measure of the quantity of matter a body contains, according to some fixed standard.

98. *Describe Gunter's chain.*

It consists of 100 links, each link containing 7.92 inches, or the whole length 66 feet, or 4 rods.

99. *What is the difference between a pound Troy and a pound avoirdupois?*

The Troy pound has 5,760 grains: the avoirdupois, 7,000.

100. *What is linear measure?*

That which is used in measuring lines or distances.

101. *What are a square, and a cube?*

A square is a superficial figure having four equal sides and four equal angles; a cube is a solid figure having six equal sides.

102. *How many inches in a wine gallon, in a beer gallon, and in a bushel?*

In a wine gallon, 231 cubic inches; in a beer gallon, 282; in a bushel, 2,150.4 cubic inches.

103. *What are duodecimals?*

The division and subdivision of a unit, resulting by continually dividing by 12.

104. *What is percentage? What is its base?*

Such part of a number as is represented by the per cent. Its base is the number on which the percentage is reckoned.

105. *What do the words* per cent. *mean?*

By the hundred.

106. *Name and define the elements involved in percentage?*

The elements are: the base, or number of which the per cent. is taken; the rate, or number of hundredths taken; the percentage, or quantity taken; the amount, or sum of the base and the percentage; and the difference, or base less the percentage.

107. *What is the difference between rate and rate per cent?*

The rate is the number of hundredths, and the rate per cent. is the fraction which denotes how many hundredths are taken. Thus, in 3%, or $\frac{3}{100}$, 3 is the rate and $\frac{3}{100}$ the rate per cent.

108. *Give the applications of percentage.*

The rules of percentage are applied to the computing of interest, discount, commission, taxes, insurance, duties, and especially profit and loss.

109. *What is commission? What is brokerage?*

The percentage allowed an agent, factor or commission merchant, is commission. Brokerage is the fee paid to a dealer in money, stocks, etc., for the transaction of business.

110. *What is a commission merchant?*

An agent who buys and sells goods for another on commission.

111. *What are a consignee, and a consignor?*

A person who receives goods to sell for another is a consignee; a consignor is a person who sends goods to another to be sold.

112. *What is a company? What is a corporation?*

A company is a group of individuals united for the purpose of performing some business or undertaking. A corporation is a company formed and authorized by law to act as one person.

113. *What is a share of stock, and what is a stockholder?*

Stock is the amount of capital invested, and a share is one of the equal parts into which capital stock is divided. A stockholder is the owner of stock.

114. *What is the difference between a charter and a firm?*

A charter defines the powers of an incorporated body, while firm is the name under which an unincorporated body transacts business.

115. *What is stock at par?*

Stock is at par when it sells for its face value; it is said to be above par when it sells for more, and below par when it sells for less.

116. *What is profit and loss?*

A commercial term, used to express the gain or loss in business transactions.

117. *How do we find the loss or gain per cent. when the cost and selling price are given?*

Divide the gain or loss by the purchase price.

118. *How do we find the selling price when the cost and gain or loss per cent. are given?*

Multiply the purchase price by $1, increased or diminished, as the case may be, by the gain or loss per cent.

119. *How do we find the cost when the selling price and the gain or loss per cent. are given?*

Divide the selling price by $1, increased or diminished, as the case may be, by the gain or loss per cent.

120. *What is an instalment? An assessment? A dividend?*

An instalment is an advance payment required of the stockholders on their subscriptions to the capital stock. An assessment is a sum required of the stockholders to meet the losses of the business expenses of the company. A dividend is a sum paid to the stockholders from the profits of the business.

121. *What is insurance? A policy? A premium?*

Insurance is security on property guaranteed by one party to another for a stipulated sum, against the loss of property by any casualty. A policy is a written contract between the parties. A premium is the sum periodically paid for insurance.

122. *Define an underwriter.*

An underwriter is an insurer—the person who takes the risk.

123. *Name the kinds of insurance?*

There are six different kinds of insurance: Fire insurance, Marine insurance, Cyclone insurance, Accident insurance, Health insurance, Life insurance.

124. *What is a tax? A poll tax? An assessor?*

A tax is a money payment assessed on the person or on property of the individual for public purposes. A poll tax is a head-tax—a sum required of each male citizen liable to

taxation, without regard to his property. An assessor is the person appointed to prepare the assessment-roll and apportion the taxes.

125. *What is an inventory?*

A written list of articles of property, with their values.

126. *What are general average and jetsam?*

General average is a method of ascertaining the loss to be sustained by the proprietors of ships, freight and cargo respectively where a part of the property has been sacrificed or damaged for the common safety. Jetsam is the part of the goods thrown overboard.

127. *What are duties or customs, and what is a custom-house?*

Duties or customs are taxes levied on imported goods. A custom-house is an office established by the government for the transaction of business relating to duties.

128. *What is smuggling?*

Carrying on foreign commerce secretly, without paying the duties imposed by law.

129. *How many kinds of duties are there? Define them.*

There are two kinds of duties: ad valorem and specific. An ad valorem duty is the sum computed on the cost of the goods in the country from which they were imported. A specific duty is a sum computed on the weight or measure of the goods, without regard to their cost.

130. *What is interest, and what is usury?*

A sum paid for the use of money. Usury is interest above the legal rate.

131. *What is a custom tariff?*

A list of the rates of duties to be collected.

132. *What is the difference between simple and compound interest?*

Simple interest is the interest on the principal only; compound interest is the interest on the principal and the previous interest added.

133. *The time, rate per cent. and interest being given, how do we find the principal?*

Divide the given interest by the interest on $1 for the given time at the given rate.

134. *The time, rate per cent. and amount being given, how do we find the principal?*

Divide the given amount by the amount of $1 for the given time at the given rate.

135. *The principal, time and interest being given, how do we find the rate per cent.?*

Divide the given interest by the interest on the principal at 1 per cent. for the time.

136. *The principal, interest, and rate per cent. being given, how do we find the time?*

Divide the given interest by the interest on the principal for one year at the rate per cent.

137. *What is a partial payment? An indorsement?*

Partial payment of a note, bond, or other obligation is the payment of a certain amount of the money due on the obligation. An endorsement is anything written on the back.

138. *What is discount? What is the present worth of a debt, and how do we find it?*

Discount is an allowance made for the payment of a debt before it is due. The present worth of a debt is such a sum as, being put at legal interest, would amount to the

debt when due. It is found by dividing the given debt by the amount of $1 at interest for the given time and rate.

139. *What is a bank? What is bank discount? What are days of grace?*

A bank is a corporation chartered by law for the purpose of receiving and loaning money, and perhaps also of issuing a paper circulation. Bank discount is an allowance made to a bank for the payment of a debt before it is due. Days of grace are three days allowed a debtor to pay his obligations after they become due. This practice has been discontinued in New York State.

140. *What is a promissory note? What is a bank note? What is a negotiable note?*

A promissory note is a written agreement to pay a certain sum either on demand or at a specified time. Bank-notes are paper currency issued by banks as money. A negotiable note is one which may be bought and sold, or negotiated, and is made payable to the bearer or to the order of the payee.

141. *Name and define the kinds of notes.*

They are classified as time notes, negotiable notes, joint notes, bank notes, drafts, stock, and bonds.

142. *What is a notary public? What is a protest?*

An officer authorized by law to attest the validity of documents or undertakings of any kind. A protest is a formal declaration in writing, made by a notary public, at the request of the holder of a note, notifying the makers and the endorsers of its non-payment.

143. *What is a draft? A check?*

A draft is a note of exchange, issued by one party, calling upon a second party to pay over to a third party so much money, and charge therewith the account of the third party. A check is also a note of exchange, but made

payable at some bank where the person issuing it has deposits or credit.

144. *What is a bond? What is a coupon?*

Bonds are interest-bearing notes issued by nations, states, cities, railroad companies, and other corporations as a means of borrowing money. The coupons are the due-bills for the interest, which, as they become due, are cut off and presented for payment.

145. *What do the terms "five-twenties" and "ten-forties" mean?*

They are applied to government bonds and indicate the time when due. The five-twenties are due twenty years after issue, although the government can pay them any time after five if they choose to do so. The same rule of interpretation applies to the ten-forties. These war-bonds are now out of date.

146. *What is exchange, and how many kinds are there?*

Exchange is a method of remitting money from one person to another, or making payments by written orders. There are two kinds, domestic and foreign.

147. *Define these.*

Domestic or inland exchange is the exchange between different places in the same country. Foreign exchange is the remittance made between different countries.

148. *What is a bill of exchange?*

It is a written request or order upon one person to pay a certain sum to another person, or to his order, at a specified time. A draft or check is one kind of bill of exchange.

149. *How many parties are there to a transaction in exchange?*

There are always three, and usually four.

150. *What is a set of exchange? What is a course of exchange?*

It consists of three copies of the same bill sent by different conveyances to provide against a loss; when one has been paid the others are void. A course of exchange is the current price paid in one place for bills of exchange on another place.

151. *What is equation of payments?*

The process of finding the mean time of the payment of several sums, due at different times, without interest.

152. *What is equated time?*

The date at which several debts may be paid at one time.

153. *What is the focal date?*

The date by which all others are compared in averaging an account.

154. *What is partnership?*

A relation established by two or more persons in trade. The individuals thus associated are called partners.

155. *What is the difference between simple and compound partnership?*

A simple partnership is one in which each of the partners has his capital invested for the same length of time. A compound partnership is that in which the capital of the partners is employed for different periods of time.

156. *What is an endorsement?*

The endorsement of a bill of exchange is the writing upon its back by which the payee relinquishes his title, and transfers the payment to another.

157. *What is an acceptance?*

The acceptance of a bill is the promise which the drawee makes to pay it at maturity.

158. *How is this obligation acknowledged?*

By writing the word "accepted," with his signature, across the face of the bill.

159. *What is a bankrupt?*

A bankrupt is a person who fails in business and has not property enough to pay his bills.

160. *What is the difference between a bankrupt and an insolvent?*

"Bankrupt" is strictly a term applicable only to a trader, while the term "insolvent" applies to any person who is unable to pay his debts.

161. *Define bankruptcy.*

It is the condition of the business of a bankrupt.

162. *What is analysis?*

It is the process of arriving at a required result by following a course of reasoning, and not by formal rules.

163. *What is ratio? Define each kind.*

Ratio is the comparison of two numbers with each other. Arithmetical ratio is the difference between two numbers. Geometrical ratio is one divided by the other.

164. *What are the terms of a ratio?*

The two numbers compared.

165. *What are the antecedent and consequent?*

The antecedent is the first term of a ratio; the consequent is the second term.

166. *What are direct and inverse ratio?*

Direct ratio is dividing the consequent by the antecedent. Inverse ratio is dividing the antecedent by the consequent.

167. *In how many ways may the ratio of two numbers be expressed?*

In two ways: By placing a colon between the terms, or by the form of a fraction, taking the antecedent for the numerator and the consquent for the denominator.

168. *What is the difference between a simple ratio and a compound ratio?*

A simple ratio is the ratio of two numbers. A compound ratio is the product of two or more simple ratios.

169. *What is proportion?*

An equality of ratios.

170. *Which are the extremes and the means of a stated proportion?*

The extremes are the first and fourth terms of a stated proportion. The means are the other two.

171. *What is a continued proportion?*

A proportion with more than two equal ratios; as, 3:5::6:10::9:15.

172. *How many antecedents are there in a proportion, and how many consequents?*

As each ratio has an antecedent and consequent, the first and third terms of a proportion are the antecedents, and the second and fourth the consequents.

173. *How are ratio and proportion distinguished?*

Ratio is the relation between two numbers, while proportion is the relation between two ratios.

174. *What is a simple proportion?*

An equality between two simple ratios.

175. *What is a direct proportion?*

One in which each term increases or diminishes, as the one on which it depends increases or diminishes.

176. *What is an inverse proportion?*

One in which each term increases as the term upon which it depends diminishes, or diminishes as it increases.

177. *What is a compound proportion?*

A proportion in which either ratio is compound.

178. *Of what does alligation treat?*

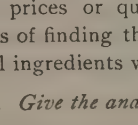
Of mixing or compounding two or more ingredients of different values.

179. *How many kinds of alligation are there? Define each.*

Two: medial and alternate. Medial is the process of finding the average price or quality of several ingredients whose prices or qualities are known. Alternate is the process of finding the proportional quantity to be taken of several ingredients whose prices are known.

180. *Give the analysis of alligation?*

Alligation is but a short way of performing an analysis. To show the process we will unite 3, 4, 7, 10, to form a value worth 6.



It will be noticed that the difference between 10 and 6 is a loss of 4, and to make a loss of 1 will require $\frac{1}{4}$, also there will be a gain of $\frac{1}{3}$ in the opposite connection. The proportion, then, if the two terms 3 and 10, expressed in fractions, is $\frac{1}{3}$ and $\frac{1}{4}$, which, reduced to a common denominator, is $\frac{4}{12}$ and $\frac{3}{12}$, or expressed in whole numbers, 4 and 3, which, in alligation, is understood as an exchange of difference without the use of fractions and their reduction to whole numbers.

181. *What is an annuity?*

A sum of money payable at certain intervals of time, usually one year.

182. *Name and define the kinds of annuity?*

A certain annuity, which continues for a fixed period of time; a perpetual annuity, continuing forever; a contingent annuity, depending upon certain occurences, as on the death of a person; an annuity in reversion, one that begins at a specified future time or event; and an annuity in arrears, is one the payments of which have been allowed to accumulate instead of being paid.

183. *What is involution?*

The process of raising a number to a given power.

184. *What is a surd?*

The indicated root of an imperfect power.

185. *What is the power of a number?*

A power of a number is the result obtained by using it a certain number of times as a factor.

186. *What is a perfect power? An imperfect power?*

A perfect power is a number whose root can be found. An imperfect power is one whose root cannot be exactly found.

187. *What is the exponent of a power?*

The exponent of a power is a number placed at the right of the root and just above it, to show the number of times the root is to be used, as $3^4 = 3 \times 3 \times 3 \times 3$.

188. *Define evolution.*

Evolution is the process of extracting the root of any number considered a power. It is the opposite of involution.

189. *What is the root of a number?*

The root of a number is one of the equal factors of that number.

190. *How are the roots of numbers indicated?*

By the sign called a radical $\surd$. The figure on the sign indicates the root.

191. *What is the square root of a number?*

One of two equal factors that produce that number.

192. *What is the cube root of a number?*

One of three equal factors that produce that number.

193. *What is an arithmetical progression?*

A series of numbers increased or diminished by a common difference.

194. *What is a geometrical progression?*

A series of numbers increased or diminished by a constant multiplier.

195. *What five things are to be considered in an arithmetical progression?*

The first term, the last term, the number of terms, the common difference and the sum of the series. Three of these being given, the other two can be found.

196. *What things are to be considered in a geometrical progression?*

They are the first term, the last term, the number of terms, the constant multiplier, and the sum of the series. Three of these being given, the other two can be found.

197. *What is a duodecimal?*

A denominate number in which twelve units of any denomination make a unit of the next higher denomination.

198. *What is mensuration?*

The art of measuring magnitudes.

199. *What is magnitude?*

Any thing which has length, breadth and thickness, or all of them.

200. *What is the measuring unit of surfaces?*

It is customary to use the square as the measuring unit, as a square inch, foot, rod, etc.

201. *How do you find the area of a parallelogram and a square?*

By multiplying the length by the breadth.

202. *How do you find the area of* (a) *a rhombus*, (b) *of a trapezium*, (c) *of a triangle?*

(*a*) By multiplying the length by the altitude; (*b*) by multiplying half the sums of the parallel sides by the altitude; (*c*) by multiplying the base by half the altitude.

203. *How do you find the area of a triangle when the three sides are given?*

From half the sum of the three sides subtract each side respectively; then multiply together half the sum and the three remainders, and extract the square root of the product.

204. *How do you find the circumference of a circle when the diameter is given?*

To find the circumference multiply the diameter by 3.14159; to find the diameter, divide the circumference by the same number.

205. *How do you find the area of a circle?*

By multiplying half the circumference by half the diameter; or, by multiplying the circumference by a fourth of the diameter.

206. *How do you find the side of the greatest square that can be inscribed in a circle of a given diameter?*

Divide the square of the given diameter by 2, and extract the square root of the quotient.

207. *How do you find a mean proportional between two numbers?*

By multiplying the given numbers together, and extracting the square root of the product.

208. *How do you find the solidity of bodies whose sides are perpendicular to each other?*

By multiplying the length, breadth and thickness.

209. *How do you find the solidity of a prism?*

By multiplying the area of the base by the height.

210. *How do you find the lateral surface of a right prism?*

By multiplying the length by the perimeter of the base.

211. *How do you find the solidity of a pyramid or cone?*

By multiplying the area of the base by $\frac{1}{3}$ of the altitude.

212. *How do you find the lateral or convex surface of a regular pyramid or cone?*

By multiplying the perimeter of the base by $\frac{1}{2}$ of the slant height.

213. *How do you find the solidity of a cylinder?*

By multiplying the area of the base by the height or length.

214. *How do you find the convex surface of a cylinder?*

By multiplying the circumference of the base by the height.

215. *How do you find the surface of a sphere or globe?*

By multiplying the circumference by the diameter.

216. *How do you find the solidity of a sphere or globe?*

By multiplying the surface by $\frac{1}{6}$ of the diameter.

217. *How do you find the side of a square equal in area to any given surface.*

By extracting the square root of the given surface.

218. *How do we measure lumber?*

Multiply the length in feet by the product of the breadth and thickness, both in inches, and divide the result by 12.

219. *How do we find the solid contents of a stick of round timber?*

By multiplying the length by $\frac{1}{4}$ the mean circumference.

220. *What is gauging?*

The process of finding the contents or capacity of casks, barrels, etc.

221. *How do we find the contents of casks?*

Multiply the square of the mean diameter by the length, and this product by .0034 to obtain the wine gallons. Using the decimal .0028 will give us the beer gallons.

222. *Define the metric system of measurement.*

The metric system is a decimal system of weights and measures, having the metre for the base or unit.

223. *What is the measure of the metre in inches?*

It measures 39.3708 inches.

224. *From what was the metre obtained?*

It is one ten-millionth part of a quadrant of the earth's meridian.

TEST EXAMPLES.

[The following examples embody a great variety of practical principles, and have been selected especially to test the knowledge of the student.]

1. One gentleman meeting another, and inquiring the time past 12 o'clock, received for an answer: $\frac{7}{5}$ of the time from now to midnight; what o'clock in the afternoon was it? *Ans.* 5 h. 40 m.

2. Where shall a pole 60 feet high be broken, that the top may rest on the ground 20 feet from the stump? *Ans.* $26\frac{2}{3}$.

3. Suppose a man owes $1,000. What sum shall he pay yearly so as to cancel the debt, principal and interest, at the end of three years, reckoning it at 6 per cent. simple interest? *Ans.* 371\frac{11}{109}$.

4. A gentleman has a garden 400 feet long and 300 feet wide which he would raise 9 inches higher by means of the earth to be dug out of a ditch that goes around it. To what depth must the ditch be dug, supposing its breadth to be everywhere 6 feet? *Ans.* $10\frac{9}{7}\frac{5}{8}$.

5. Divide $1,000 among A, B and C, so that A may have $156 more than B, and B $62 less than C. *Ans.* A, 416\frac{2}{3}$; B, 260\frac{2}{3}$; C, 322\frac{2}{3}$.

6. If 21 cows eat up 8 acres of grass in 6 weeks, and 18 cows eat up the same in 9 weeks, how many cows will it maintain for 18 weeks, if the grass grow uniformly during that time? *Ans.* 15 cows.

7. Required the thickness of the lead of a pipe $1\frac{1}{4}$ inch bore, which weighs 16 lbs., a yard in length, a cubic foot of lead weighing 11,325 oz. avoirdupois. *Ans.* 2.329 + in.

8. If a cubic foot of brass were drawn into wire $\frac{1}{40}$ of an inch in diameter, required the length of the wire, supposing no loss in the metal. *Ans.* 55 m., 4 fur., 104 yds., 2 ft., 4 in. +.

9. Divide $25 between 2 boys in such a proportion that, after it is divided, A shall have $\frac{1}{2}$ more than B. *Ans.* A, $15; B, $10.

10. A makes B a present of $100, on condition that he shall expend it in cows, sheep, and geese; cows at $10 each, sheep at $1, and geese at 16$\frac{2}{3}$ cents, so as to have just 100 in the whole. How many must he purchase of each? *Ans.* 5 cows, 41 sheep, and 54 geese.

11. If $\frac{1}{3}$ of 6 be 3, what will $\frac{1}{4}$ of 20 be? *Ans.* 7$\frac{1}{2}$.

12. How long must I keep $300 to balance the use of $500, which I lent a friend 4 months? *Ans.* 6$\frac{2}{3}$ months.

13. If 800 men have provisions for 2 months, how many

must leave that the remainder may subsist 5 months on the same? *Ans.* 480.

14. A hare, running 36 rods a minute, has 57 rods the start of a dog; how far must the dog run to overtake him, running 40 rods per minute? *Ans.* 570 rods.

15. The hour and minute hands of a watch are together at 12 o'clock; when are they next together? *Ans.* 1 h., 5m., $27\frac{3}{11}$ s.

16. If a pole be $\frac{1}{3}$ in the mud, $\frac{3}{5}$ in the water, and 6 feet out of the water, what is its length? *Ans.* 90 feet.

17. A man being asked how many geese he had, replied: If I had $\frac{1}{2}$ as many as I now have, and $2\frac{1}{2}$ geese more, I should have 100; how many had he? *Ans.* 65.

18. The head of a fish is 4 feet long, the tail as long as the head and $\frac{1}{2}$ the length of the body, the body as long as the head and tail; what is the length of the fish? *Ans.* 32 feet.

19. A and B can build a wall in 4 days, B and C in 6 days, A and C in 5 days; required the time if they work together. *Ans.* $3\frac{9}{37}$.

20. A man left his two sons, one 14, the other 18 years old, $1,000, so divided that their shares, being put at 6 per cent. interest, should be equal when each should be 21 years old; what was the share of each? *Ans.* $546.153+; $453.846+.

21. A gentleman divided his fortune among his sons, giving A $9 as often as B $5, and C $3 as often as B $7: C received $7,442.10½; what was the whole estate? *Ans.* $56,063.857$\frac{3}{7}$.

22. Three horses, belonging to 3 men, do work to the amount of $26.45; A and B's horses are supposed to do $\frac{3}{4}$ of the work, A and C's $\frac{9}{10}$, B and C's $\frac{13}{20}$, on which supposition the owners are paid proportionately; what does each receive? *Ans.* A, $11.50; B, $5.75; C, $9.20.

23. A gay fellow spent $\frac{2}{7}$ of his fortune, after which he gave $7,260 for a commission, and continued his profusion

till he had only $2,178 left, which was $\frac{3}{8}$ of what he had after purchasing his commission; what was his fortune? *Ans.* $18,295.20.

24. A general, placing his army in a square, had 231 men left, which number was not enough by 44 to enable him to add another to each side; how many men in the army? *Ans.* 19,000.

25. Suppose that a man stands 80 feet from a steeple, that a line to him from the top of the steeple is 100 feet long, and that the spire is three times as high as the steeple; what is the length of a line reaching from the top of the spire to the man? *Ans.* 197 feet, nearly.

26. How many acres in a square field measuring 70.71 rods between the opposite corners? *Ans.* $15\frac{3}{8}$ acres.

27. How long does it take sound to travel 120 miles? *Ans.* 9 m. 14 sec.+

28. A laborer dug a cellar, the length of which was 2 times the width, and the width 3 times the depth; he removed 144 cubic yards of earth; what was the length? *Ans.* 36 feet.

29. A owes B $750, due in 8 months, but receiving $300 ready money, he extends the time of paying the remainder, so that B shall lose nothing; when was it paid? *Ans.* 1 yr. 1 mo. 10 days.

30. The sum of two numbers is $266\frac{2}{3}$, and the product of the greater multiplied by 3 equals the product of the less multiplied by 5; what are the numbers? *Ans.* 100, and $166\frac{2}{3}$.

31. A park 10 rods square is surrounded by a walk which occupies $\frac{19}{100}$ of the whole park; what is its width? *Ans.* 8 ft. 3 in.

32. How many square inches of leather will cover a ball $3\frac{1}{2}$ inches in diameter? *Ans.* $38\frac{1}{2}$ sq. inches.

33. How many solid inches in a globe 7 inches in diameter? *Ans.* $179\frac{2}{3}$ solid inches.

34. What are the solid contents of a pyramid, the base

of which is 4 feet square and the perpendicular height 9 feet? *Ans.* 48 solid feet.

35. What are the solid contents of a stick of timber 18 feet long, one end of which is 9 inches square and the other end 4 inches square, uniformly diminishing throughout the whole length? *Ans.* 5 solid feet, 936 solid inches.

36. What are the solid contents of a round log of wood 36 feet long, 1.6 feet in diameter at one end, and diminishing gradually to a diameter of .9 of a foot at the other? *Ans.* 45.333 + solid feet.

37. How many gallons of wine will a cask contain, the head diameter of which is 25 inches, and the bung diameter 31 inches, and the length 36 inches? *Ans.* 102.93+ gallons.

38. Two men carry a kettle weighing 200 pounds; the kettle is suspended on a pole, the bale being 2 feet 6 inches from the hands of one, and 3 feet 4 inches from the hands of the other; how many pounds does each bear?

Ans. { 114⅔ pounds. / 85⅓ pounds.

39. If a triangular piece of land 30 rods in length, be 20 rods wide at one end and comes to a point at the other, what number of square rods does it contain? *Ans.* 300.

40. There are two globes; one of them is 1 foot in diameter, and the other 40 feet in diameter; how many of the smaller globes would it take to make one of the larger? *Ans.* 64,000.

41. What is the area of a circle 1 mile in circumference? *Ans.* 50 a. 3 r. 28.7399 + r.

42. A conical stack of hay is 20 feet high, and its base 15 feet in diameter; what is its weight, allowing 5 lbs. to a cubic foot? *Ans.* 5,890.5 lbs.

43. How many bushels will a cubical bin contain whose sides are 9 feet? *Ans.* 585.80357 bushels.

44. How many hogsheads will a cylindrical cistern 10 feet deep and 6½ feet diameter contain? *Ans.* 39.401 hhds.

45. How far from the end of a stick of timber 30 feet long, of equal size from end to end, must a lever be placed so that 3 men, 2 at the lever and 1 at the end of the stick, may each carry $\frac{1}{3}$ of its weight? *Ans.* 7½ feet.

46. If 100 eggs are placed in a straight line a rod apart, how many miles must a person travel to bring them one by one to a basket placed a rod from the first egg? *Ans.* 31 m. 180 r.

47. Said A to B: if I take one of your bags I shall have twice as many as you, and if I give you one of mine, we shall have an equal number? *Ans.* 5 and 7.

48. Divide $1,000 between A, B, and C, and give A $120 more than C, and C $95 more than B? *Ans.* $230 B's, $325 C's, $445 A's.

49. A man's desk was robbed three nights in succession; the first night, half the number of dollars was taken and half a dollar more; the second, half the remainder was taken and half a dollar more; the third night, half of what was then left and half a dollar more, when it was found he had $50 left; how much had he at first? *Ans.* $407.

50. A owns $\frac{3}{8}$ and B $\frac{1}{16}$ of a ship; A's share is worth $10,000 more than B's; what is the value of the ship? *Ans.* $32,000.

51. A man gave his oldest son $\frac{1}{2}$ of his property less $50; to the second he gave $\frac{1}{3}$, and to the youngest he gave the remainder, which was $\frac{1}{3}$ less $10; what was the amount of his property? *Ans.* $360.

52. What number is that, $\frac{3}{5}$ and $\frac{1}{4}$ of which being multiplied together, will produce the number itself? *Ans.* 20.

53. The difference of two numbers is 53 and the difference of their squares is 10,759; what are the numbers? *Ans.* 75 and 128.

54. The sum of two numbers is 120, and the difference of their squares is 4,800; what are the numbers? *Ans.* 40 and 80.

55. The diagonal of a square field is 120 rods; what is its area? *Ans.* 7,200 rods.

56. Find the side of the greatest square beam which can be hewn from a log 5 feet in diameter. *Ans.* 3.535519 feet.

57. A man wished to tie his horse by a rope so that he could feed on just an acre of ground; how long must the rope be? *Ans.* 7.13645 rods.

58. What number is that $\frac{7}{8}$ of which exceeds $\frac{4}{5}$ of it by 45? *Ans.* 600.

59. At what discount must I buy stocks, so that by selling at 2 per cent. premium I may gain 20 per cent. on my investment? *Ans.* 15 per cent.

60. A debt was paid with interest August 18, 1857; had it been paid May 12, 1859, there would have been due $26 more; what was the original debt? *Ans.* $250.

61. Find the surface of a sphere whose solidity is 65.45 cubic inches? *Ans.* 78.54 square inches.

62. A man has a pile of wood 33 feet 9 inches long, 20 feet wide, and 5 feet high; if it is piled in a cubical form, how high will it be? *Ans.* 15 feet.

63. Two merchants had each 40 gallons of wine at $1.80 a gallon; they wish to make it worth $1.20 a gallon; one pours in water, the other alcohol at 40 cents a gallon; how many more gallons in one mixture than in the other? *Ans.* 10 gallons.

64. A contributed $1,400, B $2,200, C $1,875. B gained $27.30 more than C; required the total gain. *Ans.* $459.90.

65. A owes B $2,500 due in 6 months; B wishes him to pay part now and retain the remainder 15 months; how much should he pay now? *Ans.* $1,500.

66. After 5 gallons of water had been added to 45 gallons of pure wine, the mixture was worth $1.26 per gallon; what was the pure wine worth per gallon? *Ans.* $1.40.

67. At 10 per cent. premium, what bill of exchange on London can be bought for $3.30? *Ans.* £67 10s.

68. What debt due in 4 months, together with $600 due in 9 months, could be paid in 7 months, without loss to either?

69. A cistern is $\frac{2}{3}$ full of water; after 35 gallons are taken out it is $\frac{3}{8}$ full; how many gallons will it contain? *Ans.* 120.

70. I was married at the age of 21; if I live 19 years longer I shall have been married 60 years; what is my age? *Ans.* 62 years.

71. A boat goes $16\frac{1}{4}$ miles an hour down stream, and 10 miles an hour up stream; if it takes $22\frac{1}{2}$ hours longer in coming up than going down, how far down did it go? *Ans.* 585 miles.

72. I bought a horse for $156 due in 8 months, and sold him at once for $180; find the gain per cent., interest $4\frac{1}{2}$ per cent. *Ans.* $18\frac{1}{3}$ per cent.

73. After spending 25 per cent. of my money, and 25 per cent. of the remainder, I had left $675; what had I at first? *Ans.* $1,200.

74. A man sold a house at 22 per cent. loss, losing $748; what did he receive for it? *Ans.* $2,652.

75. To carry 7 t. 10 cwt. 25 miles costs $18.75; how much can be carried 125 miles for $131.25? *Ans.* 10 t. 10 cwt.

76. The base of a right-angled triangle is 42 feet, its hypotenuse 58; find the area. *Ans.* 840 square feet.

77. At $1.47 a bushel, what cost 17 bushels, 3 pecks, 2 quarts, 1 pint of fruit? *Ans.* $26.21.

78. A boy hired to a mechanic for 20 weeks on condition that he should receive $20 and a coat. At the end of 12 weeks the boy quit work, when it was found that he was entitled to $9 and the coat; what was the value of the coat? *Ans.* $7.50.

79. A farmer sold 34 bushels of corn and 56 bushels of barley for $63.10, receiving 35 cents a bushel more for the barley than for the corn; what was the price of each per bushel? *Ans.* $48\frac{1}{3}$, price of corn; $83\frac{1}{3}$, price of barley.

80. Sold $\frac{1}{2}$ of a lot of lumber for what $\frac{5}{8}$ of it cost; what per cent. was gained on the part sold? *Ans.* 25 per cent.

81. A, B and C can do a job of work in 12 days, C can do it in 24 days, and A in 34 days; in what time can B do it alone? *Ans.* $81\frac{3}{5}$ days.

82. Of what principal is $150 the compound interest for 2 years at 7 per cent.? *Ans.* $1,035.196 +.

83. A man in Buffalo purchased a draft on St. Paul, Minnesota, for $5,320, drawn at 60 days, paying $5,141.78; what was the course of exchange? *Ans.* $2\frac{1}{8}$ per cent.

84. What is the difference between half a solid foot and a solid half foot? *Ans.* 648 cubic inches.

85. The bank discount of a certain sum for 6 months was $188.49; what would have been the true discount? *Ans.* $180.

86. The time since noon is $\frac{7}{17}$ of the time to 4 o'clock P.M.; what is the time? *Ans.* 10 minutes past 1 o'clock P.M.

87. A man gave $\frac{2}{5}$ of an estate to A, $\frac{3}{4}$ of the remainder to B, and the balance to C, who received $685 less than A; require the value of the estate. *Ans.* $2,740.

88. Bought some lemons for $7.20; had I received 30 more, each would have cost $\frac{3}{4}$ as much; how many did I buy? *Ans.* 90.

89. The three sides of a triangle are 16, 63 and 65; find the area? *Ans.* 504.

90. A man having oranges at 4 cents each and apples at 2 for 1 cent, gained 20 per cent. by selling 5 dozen for $2.04; how many of each did he sell? *Ans.* 40 oranges, 20 apples.

91. Interest $67.50, amount $217.50, time 5 years 7 months 15 days; require the rate. *Ans.* 8 per cent.

92. A horse was tied by a rope 52 feet long, fastened to the top of a stake 20 feet high; over what area can he graze? *Ans.* 26.586+P.

93. How many pencils must be bought for $1.00 so that

20 per cent. may be gained by selling them 4 for 1 cent? *Ans.* 480.

94. The square root of a certain number is 4,096; what is the cube root of the same number? *Ans.* 256.

95. The first term of an arithmetical series is 17, the common difference 6, the last term 161; how many terms are there? *Ans.* 25.

96. A prism is 6 feet 4 inches high, on a base 3 feet 9 inches square; find the solidity. *Ans.* 89 cubic feet, 108 cubic inches.

97. For a note of $340, discounted at 6 per cent., a bank paid $336.43; how many days had the note to run? *Ans.* 60 days.

98. If to a certain number its half be added, and the sum subtracted from 1,000, the remainder will be ten greater than the number itself; what is the number? *Ans.* 396.

99. What is the area of a circle whose diameter is 1 foot 1 inch? *Ans.* 132.7326 square inches.

100. A's income is 16 per cent. of his capital; he is taxed 2½ per cent. of his income, and pays $26.04; what is his capital? *Ans.* $6,510.

101. The expense of building a public bridge was $1,260.52, which was defrayed by a tax upon the property of the town. The rate of taxation was 3¼ mills on $1, and the collector's commission was 3½ per cent.; what was the valuation of the property? *Ans.* $401,920.

102. A man received $33.25 interest on a sum of money loaned 5 years previous at 7 per cent.; what was the sum lent? *Ans.* $95.

103. A house that cost $8,250, rents for $750 a year; the insurance is $\frac{6}{10}$ per cent. and repairs ½ per cent. every year; what rate of interest does it pay? *Ans.* 8 per cent.

104. Bought $860 bank stock at 4 per cent. advance; sold at a discount of 2½ per cent.; find the loss. *Ans.* $55.90.

105. What is the difference between the true and the bank discount of $1,375.50 for 60 days, at 6 per cent.? *Ans.* $ .14.

106. What per cent. will be gained by buying apples at the rate of 3 for 1 cent, and selling them at 3 cents each? *Ans.* 800 per cent.

107. Find two numbers whose difference equals 1,427, and $\frac{2}{3}$ of the first equal $\frac{3}{4}$ of the second. *Ans.* 12,843 and 11,416.

108. Find the solid contents of a globe whose diameter is 1 foot 3 inches? *Ans.* 1 cubic foot, 39.15 cubic inches.

109. A, B and C bought a farm for $21,250, of which A paid $712 more than B, and $3,551 less than C; what sum did each pay? *Ans.* A, $6,137; B, $5,425; C, $9,688.

110. At what time between 5 and 6 o'clock is the minute hand 14 minutes behind the hour hand? *Ans.* 12 minutes after 5 o'clock.

111. What is the present worth of a debt due in 4 years 8 months 10 days, the true discount, at 6 per cent., being $169? *Ans.* $600.

112. Divide, 2,331 among A, B, and C, in the ratio of $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$. *Ans.* A, 945; B, 756; C, 630.

113. From a piece of ground 30 rods wide and 50 rods long, a lot 25 feet wide and 100 feet long was sold for $275; find the value of the remainder at the same rate. *Ans.* $44,646.25.

114. A man bought copper at 27 cents a pound; it lost 2 per cent. in casting; at what price per pound must he sell the castings to gain 47 per cent.? *Ans.* 40$\frac{1}{2}$ cents per pound.

115. A man bought land at $30 an acre; how much must he ask an acre, that he may abate 25 per cent. from his former asking price and still make 20 per cent. on the purchase money? *Ans.* $48.

116. A machinist sold 24 grain drills for $125 each; on one-half of them he gained 25 per cent., and on the

remainder he lost 25 per cent.; did he gain or lose on the whole, and how much? *Ans.* $200 lost.

117. A cistern has three pipes; the first will empty it in 9 hours; the other two are equal to each other in size; if all three are left open the cistern will be filled in 6 hours; how long would it take the second or third alone to fill it. *Ans.* $7\frac{1}{2}$ hours.

118. If 3 gallons of brandy, at $3 a gallon, and 5 quarts of alcohol, at 40 cents a gallon, be mixed with $\frac{1}{2}$ gallon of water, for what must the mixture be sold a gallon to gain 37 per cent.? *Ans.* $2.74.

119. Area of a circle 19,635 square feet; find the radius. *Ans.* 2 feet 6 inches.

120. Debt $245, discount $105, rate 8 per cent.; find the time. *Ans.* 9 years, 4 months, 15 days.

121. The parallel sides of a trapezoid are $37\frac{1}{2}$ feet and $38\frac{1}{2}$ feet, and are $16\frac{1}{2}$ feet apart; find the area. *Ans.* 627 square feet.

122. A horse costing $156.25 was sold for $256.25; what per cent. was gained? *Ans.* 64 per cent.

123. Principal $336, rate 10 per cent., amount $560; find the time. *Ans.* 6 years, 8 months.

124. A can do a piece of work in 6 days, A and B can do it in $3\frac{3}{7}$ days, and A, B and C in $2\frac{2}{3}$ days; how long would it take A and C to do it? *Ans.* 4 days.

125. To a certain number its fifth was added, and one-fifth of the result being added to the original number gave 6,076; find the number. *Ans.* 4,900.

126. Find the area of a triangle whose sides are 10, $10\frac{1}{2}$ and $14\frac{1}{2}$. *Ans.* $52\frac{1}{2}$.

127. What number is that whose eighth exceeds its tenth by 14 less than its twelfth? *Ans.* 240.

128. What sum must I lend for 5 years 6 months, at 8 per cent., to receive on settlement $957.24. *Ans.* $664.75.

129. I gave A $1\frac{1}{5}\frac{1}{2}$ of my money, and B $1\frac{1}{2}$ of the re-

mainder; if B received 18 cents more than A, how much had I at first? *Ans.* $36.48.

130. Sold for a man 320 acres of land at $2.56¼ per acre, and sent him $779; what per cent. commission did I charge? *Ans.* 5 per cent.

131. A man can do a piece of work in 45 days; if his son can work ⅔ as fast, how long will it take both to do it? *Ans.* 27 days.

132. Divide $5,000 between A and B, so that A's share may be $400 less than twice B's. *Ans.* A's, $3,200; B's, $1,800.

133. Mix 2¼ pints at 37 cents a pint, with 7 pints at 74 cents, and find the value of 1 pint of the mixture. *Ans.* 65 cents per pint.

134. A globe 6 inches in diameter weighs 64 pounds; what will be the weight of another globe of the same material, the diameter being 1 foot 9 inches? *Ans.* 1 t., 7 cwt., 1 qr., 19 lbs.

135. Find the bank discount of a note of $825.50, payable in 3 months, rate at 6 per cent. *Ans.* $12.79.

136. If ⅓ of a number be subtracted from ½ of the number, the remainder will be 6 less than ⅓ of the number; what is the number? *Ans.* 180.

137. What must be paid for a draft on London for £256 10s, at 10 per cent. premium? *Ans.* $1,254.

138. What is the equated time on the following debts: $180 due in 4 months, $540 due in 7 months, $280 due in 10 months? *Ans.* 7 months and 9 days.

139. If a certain number be diminished by its ⅛, and ⅜ of the remainder be added to the first number, the sum will be 18.24; required the number. *Ans.* 11.52.

140. If 2 ounces of silver, worth $1.10 an ounce, are melted with 2 ounces of gold worth 94 cents a pwt., what is the compound worth per ounce? *Ans.* $9.95.

141. Two men are 90 miles apart and travel towards each other, A starting 1 hour before B; A goes 9 miles

in 2 hours, B 11 miles in 4 hours; how far will each travel before they meet? *Ans.* A $57\frac{3}{5}\frac{3}{8}$ miles, B $32\frac{2}{5}\frac{5}{8}$ miles.

142. What date is 7 months 15 days before July 15th, 1861? *Ans.* November 30, 1860.

143. By selling at 33 cents a pound twice as much is gained as by selling at 29 cents a pound; what per cent. is gained by selling at 32 cents a pound? *Ans.* 28 per cent.

144. What per cent. of $\frac{3}{4}$ is $\frac{2}{3}$? *Ans.* $88\frac{8}{9}$.

145. In how many years will the error of the Julian Calendar involve the loss of a day? *Ans.* $128\frac{4}{7}$ years.

146. At what time between 12 and 1 o'clock do the hour and minute hands of a clock point in directions exactly opposite? *Ans.* 12 o'clock $32\frac{8}{11}$ minutes.

147. Suppose A, B and C to start from the same point and to travel in the same direction round a circular island 73 miles in distance, A at the rate of 6, B of 10 and C of 16 miles per day; in what time will they be next together? *Ans.* $36\frac{1}{2}$ days.

148. A blacksmith agreed to shoe a horse for 1 mill for the first nail in his shoe, 2 mills for the second nail, and so on; the shoes contain 32 nails; how much was he to receive? *Ans.* $42,949,672.95.

149. Sold a horse for $37.05, losing 81 per cent.; what was the loss? *Ans.* $157.95.

150. The mainmast of a ship is 95 feet long, the diameter of the base is $3\frac{1}{2}$ feet, that of the top $2\frac{1}{2}$ feet; what is its solidity? *Ans.* 677.73475 feet.

151. A club spent £2 12s. 1d.; on settling, each paid as many pence as there were individuals in the party; how many pounds were there in each? *Ans.* $78\frac{3}{5}$ pounds, $117\frac{3}{5}$ pounds.

152. A grocer divided a barrel of flour into two parts so that the smaller contained $\frac{3}{5}$ as much as the other; how many were there in the party? *Ans.* 25 persons.

153. A man having spent $\frac{1}{2}$ and $\frac{1}{3}$ of his money, had £$48\frac{1}{3}$ left; how much had he at first? *Ans.* £292.

154. If $\frac{3}{4}$ of a ton of chalk cost £$\frac{6}{7}$, what will $\frac{7}{8}$ of a ton cost? *Ans.* £1.

155. A man was hired 50 days, receiving 75 cents for every day he worked, and forfeiting 25 cents for every day he was idle; he received $27.50; how many days did he work? *Ans.* 40 days.

156. A gentleman paid $18.90 among his laborers; to each boy 6 cents, to each woman 8 cents, and to each man 16 cents; there were three women for each boy, and two men for each woman; how many men were there? *Ans.* 90.

157. A man paid $82.50 for a sheep, a cow, and a yoke of oxen; for the cow 8 times, for the oxen 24 times as much as for the sheep; what did he pay for each? *Ans.* $2.50, $20, and $60.

158. A, B and C commence trade with $3,053.25, and gain $610.65; A's stock + B's is to B's + C's, as 5 to 7; and C's stock — B's is to C's + B's, as 1 to 7; what is each one's part of the gain? *Ans.* A's gain, $135.70; B's, $203.55; C's, $271.40.

159. There is a windlass, the wheel of which is 60 inches in diameter, and the axis, around which the rope coils, is 6 inches in diameter; how many pounds on the axle will be balanced by 240 pounds at the wheel? *Ans.* 2,400 pounds.

QUESTIONS AND ANSWERS

ON

THEORY AND PRACTICE OF TEACHING.

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1. *What is it to educate a human being aright?*

It is to direct the mind, the thoughts, the feelings, the instincts, into the channel of truth, morality, enterprise, determination and economy.

2. *What is economy?*

It is the careful utilization of one's forces, and may relate to mind, strength, money, or any of the departments of mind or nature by which the greatest attainments can be acquired with the least expense of those forces.

3. *What is political economy?*

It is the utilization of the forces of government, the revenues, and the establishing of those laws of economy by which the greatest good may be distributed among the people.

4. *What are some of the principles of a true political economy?*

To administer the laws without fear or favor, to prevent monopoly, to encourage thrift, to destroy the weeds of

indolence and vice, to teach the principles of self-reliance, of co-operation, of manliness, and the grand and noble elements of truth and virtue.

5. *Do individuals have instincts?*

We are taught that reason is the great faculty by which man becomes the image of his Creator, and that instinct is nature's gift to the lower orders of creation. To us this teaching, although grand and noble in thought and purpose, does not make the true distinction between man and the brute.

Man, although endowed with the power of reason, often displays another element of his being. He instinctively laughs, cries, mistrusts, is warned by some influence, and in many ways receives impressions which, like the instincts of animals, work without knowledge or reason. The dividing line between reason and instinct cannot easily be determined.

6. *What should be the greatest accomplishment of all human beings?*

To strive to control the passions; to speak with purity of language; to rise above the vulgar and indifferent, and to be noble in thought, deed and purpose.

7. *How can these accomplishments be acquired?*

By the right cultivation of the mind while young. "As the twig is bent, so the tree is inclined."

8. *How can we estimate a nation's place in the scale of civilization?*

We can judge it by the history of its schools, the universal distribution of the same general knowledge. Knowledge is the lever that controls the progress of the world. It is the sword of success, the armor of defence, and the power that prevails.

9. *What does the theory of teaching embrace?*

School economy, methods of instruction, methods of culture and the history of education.

10. *Of what does school economy treat?*

The best modes of organizing the school and of utilizing the means of instruction.

11. *Define methods of instruction.*

Means of imparting knowledge.

12. *What do you understand by methods of culture?*

The study of the physical and mental character of man by which his faculties may be developed and strengthened.

13. *Of what should we treat in the history of education?*

We should compare the past with the present, and show the growth of education and the advantages which mark its progress.

14. *To what must the American people give credit for the wonderful development of the country's industries, and its arts and sciences?*

To free education.

15. *What should we take into consideration in making preparations for the school?*

There should be a suitable location, properly graded, drained and shaded. The house should be built for comfort, health and pleasure. The furniture, apparatus, records and studies should be carefully arranged and selected. The whole should be homelike and attractive.

16. *What does a suitable location embrace?*

Convenience of access; suitability of grounds and surroundings; healthfulness of neighborhood, and beauty.

17. *What should be done for the school grounds?*

They should be thoroughly drained, dry, level, sodded,

ornamented with shade trees, neatly fenced, and supplied with pure water.

18. *What care should you exercise over the school-house, the furniture, the apparatus and the grounds?*

The teacher should consider the whole as his own, and be thoughtful, vigilant and mindful of the responsibility which has been placed upon him.

19. *Should the teacher go to his boarding-place for dinner?*

Under no consideration should he leave the school grounds, as his presence is required to keep peace, order, prevent teasing, protect property and strive to impress upon pupils the importance of being ladies and gentlemen.

20. *State the objects of graded schools.*

They economize the labor of instruction; lessen the cost; make teachers more effective; promote good order in school; prompt the ambition of pupils; provide instruction in the higher branches of learning; and remove the necessity of children's leaving home to obtain a good education.

21. *How are schools graded?*

Into the primary, the grammar and the high school.

22. *What branches are taught in the higher department of these graded schools?*

The high-school course embraces algebra and higher mathematics, rhetoric, political economy, history, physiology, and the studies of nature, business and language.

23. *Upon what should the size of a school-house depend?*

Upon the number of pupils in attendance. An ungraded school, to be taught by one teacher, should contain at least nine hundred square feet. A house designed for 50 to 80 scholars and one recitation room, fifteen hundred

square feet. One for 80 to 120 scholars and two recitation rooms, two thousand square feet.

24. *Describe a suitable school-house for rural discricts.*

It should be rectangular in form, the door entering at the south end, while the north end should be without entrance or windows. The main room should be from twelve to sixteen feet high. The house should contain an apartment for clothing and necessaries. It should be well lighted, warmed and ventilated.

25. *How should a school-house be warmed?*

Provide a good stove, pipe and chimney. Surround the stove with a tin casing made to extend from the floor to about one foot above the top of the stove. There should be a door in the casing for putting in fuel; and a trunk for the conveyance of fresh air should start outside of the building, run under the floor and communicate directly with the door. The object of the tin casing and the trunk must be apparent to all, as the former will prevent the burning of clothing and the latter will supply a pure current of air upon which combustion depends.

26. *How should a school-room be ventilated?*

Ventilation should be regulated by the lowering of the windows from the top instead of raising the bottom sash, especially in cool weather. This will prevent a direct draft upon the heads of the pupils. Openings in the ceiling and doors will also be a means of relieving the heated pressure.

27. *What should be the furniture and equipment of a school-room?*

The desks should be of modern approval and set so as to enable all pupils to pass to and from their seats without creating confusion. There should be a library of reference books; a complete dictionary; a geographical gazetteer; a

biographical dictionary; a popular encyclopedia; sets of historical and physiological charts; outline maps.

28. *How should the teacher's desk be arranged?*

It should embody a plain business office desk, with drawers, shelves, closets and book-rack.

29. *With what apparatus should schools be supplied?*

A set of cards for teaching the alphabet, pronunciation, spelling, and elementary reading, with a stand to hang them upon; letter-blocks, and a chart of elementary sounds; writing charts; drawing cards and material; a numerical frame, and sets of square and cube root blocks; a globe, a set of outline maps, and a Tellurian; charts of history; a case of minerals and curiosities; engravings, and a thermometer.

30. *What should be the temperature of a school-room?*

In our estimation it should be 72° Fahr., although many claim that this temperature is too high; we must remember that the moving teacher cannot judge by his own feelings what would necessarily please the children.

31. *Of what use are school-records?*

To aid the teacher in his work; to give information to parents and school officers; to furnish educational statistics; to exert a beneficial influence upon the pupils.

32. *What should be the first step in the organization of a school?*

To produce a good impression. The language should be mild, but interesting. There should be no show of superiority in power or knowledge. The teacher should arrange so as to obtain their confidence and respect, holding at the same time a deep interest for the instruction of those placed in his charge.

33. *Give an outline of work preliminary to the organization of a school?*

The young teacher should consider well his adaptation to a particular school before engaging it. He should study the difficulties which he might encounter; he should lay his plans before the school officers and ask their advice; the contract should be made in writing, and if possible, the teacher should make the acquaintance of parents before opening of school.

34. *What benefits will arise by forming these acquaintances?*

It will convince the people of an interest in the school, and draw out their sympathies and general interest. It will assist in forming calculations on how to organize; and it will give a better chance for the study of human character.

35. *What should be the programme for the first day at school?*

Furnish something from the beginning that will interest; establish order in every movement; inquire how studies have formerly been arranged and how conducted. Mention the great principle of order, as though other rules were far inferior. Do not impose upon the pupils stipulations that this shall or that shall not be done. Be moderate in demands, but impress upon their minds the necessity of walking and studying in an orderly manner, and of keeping the school-room pleasant and quiet.

36. *How can you prepare a programme for every day's work?*

By the advice and consent of the pupils form a system of work; arrange the studies systematically; be prompt in the recitations, in study and in exercise.

37. *What are the employments of a school?*

Study, recitations and exercise.

38. *What are the objects of study?*

Knowledge, discipline, aspiration and efficiency.

39. *By what principles should incentives to study be tested?*

They should be continuous, and arise from the nature of the subject and the circumstances connected with learning.

40. *What incentives are often used to create ambition and interest?*

Prizes; merit-marks; emulation; fear of punishment; shame and ridicule.

41. *Should such artificial means be employed?*

Some condemn and some allow. One bad feature is that it often creates jealousies and ill-feelings. As an illustration, the author will mention a circumstance which occurred in 1872 while teaching a district school. The term was within two weeks of completion, and by request a class of thirty-two scholars was organized for spelling, each taking his place according to the number of a ticket drawn, there being thirty-two numbers. A record was kept of the position drawn and compared the last day with the position then held. The contest was exciting, as each was striving to hold his own and to get above his neighbor. The one drawing ticket No. 1 was a very poor speller, and day by day found her making her way toward the foot, until she was so near that position that school became unbearable, and she took her books home the day before the term was out.

42. *What are the proper incentives to study?*

The approbation of teacher, parents and friends; desire for an honorable position in the school and in society; the pleasure of overcoming difficulties; the gratification of curiosity; hope for success in life; enjoyment of knowledge, and prospect of future rewards.

43. *What are the objects of education?*

The development of the faculties, the acquisition of knowledge and its wise application to the uses of life.

44. *What are the objects of recitation?*

To test knowledge, to acquire power of speech and of explanation, and the development of expression generally. It gives confidence and demands a careful study of the subject under discussion. It induces thought and quickens perception.

45. *How should the recitation be conducted?*

It should cover the general points in the lesson by brief and comprehensive statements, and the lesson preceding should be carefully reviewed.

46. *What is necessary for a good recitation?*

A live, intelligent teacher; recitation seats; black-boards; apparatus; reference books; a call bell; ventilation and proper temperature.

47. *What preparation should the teacher make for the recitation?*

He should have a thorough knowledge of the subject, and depend upon a general discussion rather than on quoting the words of the book.

48. *How would you teach grammar?*

Of all studies grammar is most open to general explanation. Books should be used only as a source from which to draw knowledge or suggestion. No fixed plan of recitation should be followed. The elements of grammar should be given first and carefully illustrated. Definitions should be learned only as applied. There should be no rotation, no fixed laws of advancement. Analyzing should be introduced as soon as we have asked the first question. We should teach from observations, simple at first, until the main principles are thoroughly comprehended.

49. *How should geography be taught?*

Much as you would grammar. Give lessons which will compare one section of the earth or the country with another. It is not necessary to be confined to one book, as the same principles are embodied in all of them. Have a variation of topics. Call for the various productions of South America and the particular countries where each is produced. This is enough for one lesson. Better have a full knowledge of a little than fail in big attempts. Follow with other questions of interest concerning the same part of the world. The author once conducted a large class without a book for his reference, but in the class there were eight different geographies. The plan worked admirably, although a case of necessity.

50. *What is a good plan for studying history?*

On this subject the teacher should be thoroughly informed. He should map out the points of greatest interest, and as the class advances give the subdivisions. Do not be afraid to call up a subject at the beginning, the middle, or the end. Review is the great secret of success.

51. *Why is it necessary to take exercise?*

Because it conduces to health, strength, and the ability to study.

52. *Define school government.*

It is a proper organization of order, thought and action. It is the means of developing a love for study and improvement.

53. *Under what heads may school government be embraced?*

School ethics, retributions, legislation and administration.

54. *Define ethics.*

The science which treats of human rights and duties.

55. *To what does school ethics relate?*

To the rights and duties of persons connected with the school.

56. *Who are the important factors in the school?*

The teacher, the general school-officers, the communities that found and support schools, and the pupils.

57. *What may be considered some of the most important qualifications of the teacher?*

Common sense, knowledge, teaching power, government, and love of the work.

58. *What may be considered the school-duties of pupils?*

Their duties to themselves, to one another, to the school property, to the teacher, to the school-officers, to visitors, to society, and to God.

59. *What is discipline?*

A close or thorough application to some particular subject or subjects. In school life the term is often applied to the correction of particular errors and faults.

60. *What are the general features of school government?*

Force, authority, and love.

61. *What may be considered proper penalties?*

Privation of recitations, of recess, or of position in class, reproof, reports to parents, suspension, expulsion, bodily punishment, withholding favors, special restrictions or requirements.

62. *What may be considered improper penalties?*

Threatening, scolding, asking for excuses, whipping in anger, compulsory study, and any physical or mental torture beyond the absolute demand of the case.

63. *What actions of the teacher should be specially denounced?*

Any sudden or violent action, as throwing rulers or slapping the head. Care should be taken not to punish for offences done beyond the jurisdiction of the school-yard.

64. *What should every teacher do?*

Convince his pupils by his conduct that he is their friend; take special care that the school-house and appendages are kept in good order; be accurate, punctual, cheerful; study the art of aptly illustrating a difficult subject; teach honesty and morality, and strive at all times to win the esteem of his pupils.

65. *What errors should the teacher avoid?*

He should guard against prejudices; ride no "hobbies"; never lose patience while reasoning with parents; avoid wounding the feelings of a dull scholar; never compare one child with another; avoid making excuses to visitors; have nothing to do with other business in school hours; not attempt to teach too many things; not allow pupils to direct their own studies.

66. *What is good education?*

The cultivation of the nobler sentiments of man; the art which commands understanding, that subdues his passions; that extends the power of reason and begets a pure conscience.

67. *What is teaching?*

The communication of knowledge — giving instruction.

68. *What is learning?*

The acquisition of knowledge — being instructed.

69. *Who will be successful in teaching?*

Those who can comprehend human character, who can control their passions, and who have a love of the work.

70. *Who will fail to be successful teachers?*

Those who teach because of the wages, and at the same time have their minds on other matters of business. A teacher must not divide his thoughts and feelings. Teaching is a business, or profession, that requires the whole response of the faculties and will admit of no delays or thoughtless acts.

71. *How are the faculties of the mind divided?*

Into the intellect, the sensibility and the will.

72. *What faculty comes first in the natural order of development?*

The intellect.

73. *How is the intellect developed?*

By the acquisition of knowledge.

74. *What are the sources of knowledge?*

The senses and the reason.

75. *What is empirical knowledge?*

The knowledge of experience, derived through the senses, which includes all we know by seeing, hearing, touching, tasting, smelling, and through the emotional feelings.

76. *What is that knowledge called which is derived through reason?*

Rational knowledge.

77. *What does this knowledge include?*

All that comes from the power of study and thought. It is the development of the mind and understanding.

78. *What is the difference between teaching and talking?*

Teaching communicates knowledge by a course of reasoning, while talk is familiar or unrestrained conversation.

79. *What is a remedy for whispering?*

Whispering usually originates from a lack of interest. Produce a love for school and its advancement and whispering will be easily controlled.

80. *What benefits arise from the practice of music?*

Music softens the thoughts and inspires deep and sacred feelings.

81. *What are the purposes of examinations?*

To test the knowledge of the pupil and determine whether or not he has made real progress in his studies.

82. *What relation does the school hold to the state?*

It is the agent appointed by the state for preventing ignorance, raising the standard of moral and literary culture, and increasing the general prosperity.

83. *What conditions does teaching presuppose?*

A certain capacity on the part of the pupil, knowledge and skill on the part of the teacher, and information to be imparted and acquired.

84. *What are the practical points to be attained by an education?*

It should induce each person to be more industrious, more ambitious, more trustworthy, more active and systematic, more cheerful, more far-sighted, more economical as producers or preservers of property.

85. *What does education do for a people?*

It tends to make them more orderly, more submissive to good laws, more independent in political thought, more charitable and more refined, and creates a higher plane of civilization.

86. *How should pupils be dealt with at the beginning of their school experience?*

They should be received kindly, and every effort made to obtain their confidence.

87. *How may we secure a full, prompt and regular attendance?*

By making the school-room pleasant and attractive; by preserving good order; by genuine interest on the part of the teacher.

88. *What benefits arise by reciting in concert?*

It stimulates the timid to overcome their diffidence; it cultivates the voice, and produces uniformity of expression.

89. *How should a word be pronounced for spelling?*

Exactly as it should be pronounced in reading.

90. *What are some of the most common evils from which our schools suffer?*

Lack of interest on the part of parents and others concerned; frequent change of teachers; diversity of class-books; ill-qualified teachers; defective supervision.

91. *What should form the foundation for a system of teaching?*

The capability of the pupil, the educational means to be employed, and the manner of performing the work.

92. *What is meant by language lessons?*

A simple means of expressing the fundamental principles of some line of knowledge.

93. *What is method?*

The way of performing an act.

94. *How many methods are there in teaching?*

Six: the text-book, oral, Socratic, topical, discussion and lecture methods.

95. *What is the Socratic method of instruction?*

A system of questioning by which the pupil is made to work out his own problems step by step.

96. *When should a pupil commit to memory?*

Not until the subject is thoroughly understood. If it cannot be understood it will be folly to commit it to memory.

97. *What is the great end of school training?*

Mental development; the direction of thought towards the practical pursuits of life; the dispersion of ignorance and superstition, and the encouragement of a better mode of living.

98. *Should a teacher confine himself to the text-book during recitation?*

He should use the book as a guide for conducting the recitation, but under no consideration depend upon it for the interest of the exercise.. As a general rule, a book-teacher is an uninteresting human machine, a mere telephone that only communicates what the sentences contain.

99. *How much review work is necessary?*

This cannot be measured. Review work is too important to be limited, and should be continued as much as circumstances will allow.

100. *How should your class be placed when reciting?*

They should be brought as closely together as possible, and in a position as convenient to the apparatus of the school-room as practicable.

101. *What should a person do who contemplates teaching for the first time?*

He should lay out plans in accordance with the best efforts which he can recall in his experience as a scholar, or from other observations.

102. *How do you classify the elements of pedagogics?*

The physical, the intellectual, and the practical.

103. *What other names are sometimes applied to these elements?*

Gymnastics, didactics, and pragmatics.

104. *Of what does gymnastics treat?*

Of athletic exercises — the training of the muscular system.

105. *Of what does didactics treat?*

The art or science of teaching.

106. *Of what does pragmatics treat?*

The science of business.

107. *How is intelligence divided?*

Into perception, conception, and thinking.

108. *What is perception?*

The direction of the moral conduct; it is most sensitive in youth.

109. *What is conception?*

The faculty of comprehending an idea.

110. *What is thinking?*

The faculty of calculation, of planning, of reasoning.

111. *What are the elements of success in teaching?*

Executive power, self-control, thorough knowledge, and the faculty of imparting such knowledge.

112. *Should a pupil be required to report on his own conduct?*

He should not; it is a strong incentive to report incorrectly and might lead to untruthfulness.

113. *What important branch of study is often neglected in our schools?*

Spelling.

114. *What common branches should receive special attention?*

Reading, spelling, mental arithmetic, and writing.

115. *What constitutes good reading?*

A clear, distinct utterance, interspersed with proper emphasis and expression.

116. *Why do you regard mental arithmetic as worthy of special attention?*

Because it requires the use of language to demonstrate it; is a wholesome exercise for the mind; and it cultivates the memory in a practical and useful way.

117. *How should primary instruction be given?*

Largely by oral explanation.

118. *How should parents talk to their children in infancy?*

Their language should be as simple and as correct as possible. They should not exaggerate or deceive. Whatever is said should be the unqualified truth.

119. *What is kindergarten instruction?*

The teaching of young children by the use of objects, solids, surfaces and outlines. It is a method in which the eye conveys the idea, rather than the thought.

120. *What does the theory and practice of teaching embrace?*

The whole science of education, training the mind, developing thought, and inducing mental activity.

121. *Give the names of some of the most important educational reformers?*

Aschan, Montaigne, Ratich, Milton, Locke, Rousseau, Pestalozzi, Arnold, Mann, Huxley, Spencer, and many others.

QUESTIONS AND ANSWERS

ON

BOOKKEEPING.

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1. *What is bookkeeping?*

Bookkeeping is the art of recording business transactions in a systematic manner to show the true condition of a business. It is the science of accounts.

2. *What is a business transaction?*

A business transaction is, strictly, an exchange of equal values, or regarded as such.

3. *What is a debtor?*

A debtor is one who receives values.

4. *What is a creditor?*

A creditor is one from whom value is received.

5. *State what an account is.*

An account is a collection of all debits and credits involved in any business transaction, arranged under some title or heading.

6. *Define debits and credits.*

Debits are entries against debtors. Credits are entries in favor of creditors.

7. *What is the proper title for an account?*

It is the name by which the person or thing is known.

Day Book

Lowell, Mass., Oct. 1, 1897.

1	SMITH, BROWN & CO.,	*Cr.*		
	By Merchandise, per Invoice,		4000	
	4			
2	A. B. COMSTOCK,	*Dr.*		
	To 10 yards Broadcloth @ $5.00,	$50.00		
	" Linings, etc.,	10.00		
			60	
	5			
3	E. E. ADAMS,	*Dr.*		
	To 1 yard Satin	$2.00		
	" Trimmings,	1.50		
			3	50
	8			
4	S. G. RIPLEY,	*Dr.*		
	To 10 yards Cloth @ $4.00,	$40.00		
	" 50 " Cambric @ 13c.,	6.50		
	" 20 " Cambric @ 12c.,	2.40		
	" 15 " Drilling @ 25c.,	3.75		
	" 30 " Satine @ 33c.,	9.90		
	" 6 " Novelty Goods @ 75c.,	4.50		
			67	05
	Cr.			
4	By Cash,		50	
	10			
4	S. G. RIPLEY,	*Cr.*		
	By Cash on Account,		7	50

Day Book — Continued

	14			
2	A. B. COMSTOCK,	*Dr.*		
	To 10 yards Cheviot @ $1.63,	$16.30		
	" 25 " Sheeting @ 12c.,	3.00		
	" 20 " Novelty Goods @ 20c.,	4.00		
			23	30
	17			
1	SMITH, BROWN & CO.,	*Dr.*		
	To Cash on Account,		2000	
	17			
4	S. G. RIPLEY,	*Dr.*		
	To 15 yards White Duck @ 20c.,	$3.00		
	" 10 " Brown do. @ 30c.,	3.00		
	" 6 pairs Hose @ 75c.,	4.50		
			10	50
	22			
2	A. B. COMSTOCK,	*Dr.*		
	To 6 yards Drilling @ 25c.,	$1.50		
	" 1 Cap,	1.00		
	" 1 pair Hose,	0.75		
			3	25
	27			
2	A. B. COMSTOCK,	*Cr.*		
	By Cash on Account,		25	
	27			
3	E. E. ADAMS,	*Dr.*		
	To 13 yards French Cambric @ 25c.,	$3.25		
	" 14 " Silk @ $1.50,	21.00		
	" Trimmings,	10.00		
			34	25
	30			
2	E. E. ADAMS,	*Cr.*		
	By Cash in full of Account,		34	25

8. *How many and what sides has an account?*

Two sides, the left hand or debit side, and the right hand or credit side.

9. *What does each side contain?*

The debit side contains the sums for which the account has become indebted to the business. The credit side contains the sums for which the business has become indebted to the account.

10. *What does each side show?*

The debit side shows resources and losses. The credit side shows liabilities and gains.

11. *What are resources, assets, or effects?*

Property belonging to a person, firm or corporation is thus termed according to certain conditions.

12. *What are liabilities?*

All the debts and obligations of a business or corporation.

13. *What is the balance of an account?*

The difference between the two sides.

14. *If the balance is on the debit side, what is shown?*

Either a resource or a loss.

15. *If the balance is on the credit side, what is shown?*

Either a liability or a gain.

16. *How are accounts classified?*

As real or financial, representative or business.

17. *Define real accounts.*

Real accounts are those which represent resources, or liabilites, such as cash, notes receivable, notes payable, and personal accounts.

18. *Define representative accounts.*

Representative accounts are those that represent gains or losses, as merchandise, real estate, etc.

19. *What two systems of bookkeeping are there?*

Single entry and double entry.

20. *What advantage has one over the other?*

The main distinction is that while in single entry a record is kept of resources and liabilities, in double entry, a similar and additional record is kept of gains and losses. In single entry an account is kept with but one party to the transaction, either the debtor or creditor. In double entry an account is kept with both parties.

21. *What books are necessary in single entry?*

Day book, journal, cash book, and ledger.

22. *For what is the day book used?*

To record business transactions as they occur.

23. *What particulars of a business transaction should be recorded?*

The date, the transaction, the name of the person, firm or corporation, nature of payment, items with price.

24. *Illustrate.*

June 1, 1898, Bought of John Arms, for my note at 60 days, 100 bbls. flour @ $5.

25. *What will be shown at any time by a cash book properly balanced?*

The amount of cash on hand.

26. *How often, in practice, should the cash balance be verified?*

At the close of each business day.

27. *If the cash book is correctly kept, how will the debit and credit sides compare?*

The debit side will usually exceed the credit side. If

Ledger

1

Dr. *SMITH, BROWN & CO.* *Cr.*

1897						1897					
Oct.	17	To Cash,	1	2000		Oct.	1	By Merchandise,	1	4000	
"	30	" Balance,		2000							
				4000						4000	
						Nov.	1	By Balance,		2000	

2

Dr. *A. B. COMSTOCK* *Cr.*

1897						1897					
Oct.	4	To Merchandise,	1	60		Oct.	27	By Cash,	2	25	
"	14	" "	1	23	30	"	30	" Balance,	2	61	55
"	22	" "	2	3	25						
				86	55					86	55
Nov.	1	To Balance,		61	55						

Ledger — Continued

3

Dr. *E. E. ADAMS* *Cr.*

1897						1897					
Oct.	5	To Merchandise,	1	3	50	Oct.	30	By Cash,		37	75
"	27	" "	2	34	25						
				37	75					37	75

4

Dr. *S. G. RIPLEY* *Cr.*

1897						1897					
Oct.	8	To Merchandise,	1	67	05	Oct.	8	By Cash,	1	50	
"	17	" "	1	10	50	"	10	" "	1	7	50
						"	30	" Balance,		20	05
				77	55					77	55
Nov.	1	To Balance,		20	05						

the credit exceeds the debit it shows that the account at the bank has been overdrawn, or that some account on the debit side has been omitted, or that more has been entered on the credit side than has been paid out.

28. *Give particulars as to use of ledger.*

The ledger is the final book of entry. It contains a record of all the debits and credits in every business transaction. These debits and credits are arranged under appropriate heads, and give, in a condensed form, a statement of financial standing.

29. *Give abbreviations used in bookkeeping for the following terms: at, account, debtor, creditor, merchandise, the same.*

@, a/c., Dr., Cr., Mdse., Do. or ditto.

30. *How is an account closed?*

An account is closed when its debtor and creditor sides are made equal in amount.

31. *What is the object of closing an account?*

To keep it from becoming too long, or too large, and also, when there is a balance, to separate it from the rest of the account, so that when it is closed, and the balance brought down, the account may begin again with but one sum.

32. *Rule paper in proper form for day book, cash book, and ledger, single entry. Make entries of the following items, and balance cash book and ledger.*

Lowell, Mass., Oct. 1, 1897. Invested cash, $2,500. Paid for advertising, $8. Bought of Smith, Brown & Co., New York, on account, merchandise, per invoice, $4,000. Received cash for sales this day, $115.25.

Oct. 4. Sold A. B. Comstock, on account, 10 yards broadcloth @ $5; linings, buttons, etc., $10. Paid for postage, $2.50.

Oct. 5. Sold E. E. Adams, on account, one yard satin,

$2; trimmings, $1.50. Received cash for sales this day, $88.75.

Oct. 8. Sold S. G. Ripley, 10 yards cloth @ $4; 50 yards cambric @ 13 cents; 20 yards cambric @ 12 cents; 15 yards drilling @ 25 cents; 30 yards satine @ 33 cents; 6 yards novelty cloth @ 75 cents. Received cash on account, $50.

Oct. 10. Paid cash for coal, $10. S. G. Ripley paid cash on account $7.50.

Oct. 14. Sold A. B. Comstock, on account, 10 yards black cheviot @ $1.63; 25 yards sheeting @ 12 cents; 20 yards novelty goods @ 20 cents. Paid cash for postage, $1.50.

Oct. 17. Paid Smith, Brown & Co., on account, $2,000. Sold S. G. Ripley, on account, 15 yards white duck @ 20 cents; 10 yards brown do. @ 30 cents; 6 pairs hose @ 75 cents.

Oct. 22. Sold A. B. Comstock, on account, 6 yards drilling @ 25 cents; 1 cap, $1; 1 pair hose, 75 cents. Paid cash for rent, $50.

Oct. 27. Received cash, on account, of A. B. Comstock, $25. Sold E. E. Adams, on account, 13 yards cloth @ 25 cents; 14 yards silk @ $1.50; trimmings, $10.

Oct. 30. Received o E. E. Adams cash, to balance account, $.

33. *What books are used in double entry?*

Day book, journal, ledger, cash book, sales book, invoice book, bill book, pass book, and time book.

34. *What is the use of the journal?*

It is the intermediate book (but usually united with the journal) between the day book and the ledger. It contains a classified list of all debits and credits previously recorded in the day book. Its use is to facilitate the transfer of debits and credits to the ledger.

35. *What term is applied to classifying debts and credits?*

Journalizing.

36. *What is posting?*

The transferring of the debits and credits of the journal, cash book, etc., to the ledger.

37. *What is the use of the invoice book?*

To record goods bought, from whom purchased, and on what terms.

38. *What does the sales book contain?*

A record of all merchandise sold, and the terms of the sale.

39. *For what is a bill or note book used?*

To record all notes received and acceptances issued to others, by the business.

40. *What is gain?*

There is gain when property produces more than it costs.

41. *What is loss?*

There is loss when property costs more than it produces.

42. *If the debits and credits of a ledger agree is it positive proof of the correctness of the work?*

It is not. The items may have been posted to wrong accounts, or the debits and credits may have been reversed, and still, the work, though wrong, may balance.

43. *What is a notes receivable account?*

An account of notes and bills due the firm.

44. *What is a notes payable account?*

An account of notes and bills issued to other parties by the firm.

45. *What is merchandise?*

Goods, wares, or anything bought and sold.

46. *What are personal accounts?*

Accounts with persons, firms, or corporations.

47. *What is an investment?*

A certain amount of money, or its equivalent in property, put into a business.

48. *What is a net investment?*

It is the amount of the investment after withdrawals have been made. If no withdrawals it is the total investment.

49. *Define capital.*

Capital is the whole investment of a business or of an individual.

50. *What is insolvency?*

It is the condition of a business that cannot pay its debts. The liabilities exceed the resources.

51. *Formulate a general rule for determining the debits and credits in any business transaction.*

Debit whatever is received, and credit whatever is given out, or sold. This is the law of bookkeeping.

52. *When should the proprietor of a business be debited, and when credited?*

He should be debited for what he draws from the business, and for his share of the losses. He should be credited for investments, when made, and for his share of the gain.

53. *When should cash account be debited, and when credited?*

It should be debited for all money received, and credited for all money paid out.

54. *When should notes receivable account be debited, and when credited?*

It should be debited for the notes, drafts, etc.,

received, and credited when they are paid, or otherwise disposed of.

55. *When should notes payable account be debited, and when credited?*

It should be debited for all notes and acceptances redeemed, and credited when they are issued.

56. *When should merchandise be debited, and when credited?*

Debit merchandise bought; credit what it produces.

57. *Why are all persons whom the firm owes, credited?*

To show how much the firm owes each person; but the merchandise or thing received is debited.

58. *Why is all property sold, credited?*

To show how much is sold.

59. *Why is cash, deposited or paid out, credited?*

To show how much is paid out.

60. *Why are all gains credited under appropriate titles?*

To show the amount gained.*

61. *How are resources shown on the ledger?*

By an excess of the debit side of financial accounts.

62. *How are liabilities shown on the ledger?*

By an excess of the credit side of financial accounts.

63. *How are gains shown on the ledger?*

By an excess of the credit side of business accounts.

64. *How are losses shown on the ledger?*

By an excess of the debit side of business accounts.

65. *How ascertain the value of merchandise unsold?*

By taking an inventory.

*Every account of a transaction is both Dr. and Cr., but only one term is used in summarizing.

66. *What is an inventory?*

A detailed list, with cost-prices of property, goods, etc., on hand.

67. *What is the object of closing a ledger?*

To ascertain both the present condition of a business, and its progress. Its present condition is shown by a list of its resources and liabilities. Its progress is shown by a list of its gains or losses.

68. *What class of accounts is closed into loss and gain?*

Business accounts.

69. *What class of accounts is closed into the balance account?*

Financial accounts.

70. *What is a trial balance?*

A test of the correctness of ledger account.

71. *What does a balance sheet contain?*

A systematic arrangement of facts for the purpose of showing, at a glance, the condition of a business.

72. *Rule paper and arrange the following items to show the use of day book, journal and ledger in double entry:*

New York, Sept. 1, 1897. Bought of James Monroe, on account, 5000 barrels of flour @ $10.

Sept. 2. Sold Andrew Jackson, for cash, 100 barrels of flour @ $10.50.

73. *What is a receipt?*

A receipt is a written or printed acknowledgment of the acceptance of money, or whatever is specified therein.

1. Day Book

New York, September 1, 1897.

Bought of JAMES MONROE, on Account, 500 bbls. Flour @ $10.00	5000
2	
Sold ANDREW JACKSON, for Cash, 100 bbls. Flour @ $10.50,	1050

2. Journal

New York, September 1, 1897.

			Dr.	*Cr.*
1	Merchandise,	*Dr.*	5000	
2	To James Monroe,			5000
	2			
3	Cash,	*Dr.*	1050	
	To Merchandise,			1050

3. Ledger

Dr. *MERCHANDISE* *Cr.*

1897					1897				
Sept.	1	To J. Monroe,	1	5000	Sept.	2	By Cash,	1	1050

Dr. *JAMES MONROE* *Cr.*

					1897				
					Sept	1	By Mdse.,	1	5000

Dr. *CASH* *Cr.*

1897									
Sept.	2	To Mdse.,	1	1050					

Cash

Dr.					Cr.				
1897					1897				
Oct.	1	To Investment,	$2500	00	Oct.	1	By Advertising,	8	00
"	1	" Merchandise,	115	25	"	4	" Postage,	2	50
"	5	" "	88	75	"	10	" Coal,	10	00
"	8	" S. G. Ripley,	50	00	"	14	" Postage,	1	50
"	10	" "	7	50	"	17	" Smith & Brown,	2000	00
"	27	" A. B. Comstock,	25	00	"	22	" Rent,	50	00
"	30	" E. E. Adams,	37	75	"	31	" Balance,	752	25
			$2824	25				$2824	25
Nov.	1	To Cash on hand,	$752	25					

74. *Write a receipt for rent in proper form.*

$30.00 *Albany, N.Y., June 1, 1899.*

Received from James L. Foote, the sum of Thirty and $\frac{00}{100}$ Dollars, on account of rent of premises _____ for the month ending May 31, 1899.

Walter Penniman.

75. *What is a promissory note?*

It is a written promise to pay to the order of a certain party, or to bearer, a stated sum of money, at a specified time.

76. *What is a joint note?*

A joint note is one which two or more persons jointly promise to pay. Each person signing a joint note is liable for only his share.

77. *Write a non-interest bearing joint note.*

$65 $\frac{18}{100}$ *Yonkers, N.Y., Aug. 8, 1899.*

Sixty days after date we promise to pay to the order of Arthur W. Chippendale, Sixty-five and $\frac{18}{100}$ Dollars, at the Yonkers National Bank. Value received.

No. 42. Due, Oct. 7, '99.

William C. Jones.
Horace M. Chase.

78. *What is a joint and several note?*

It is one which two or more persons jointly and severally promise to pay. Each person signing such a note is held liable for the whole amount, if the others fail to pay their shares.

79. *What is a negotiable note?*

One that may be bought and sold, or negotiated. It is made payable to the bearer, or to the order of the payee.

80. *What is an indorsement?*

An indorsement makes the indorser, or the one who writes his name on the back of the note, liable unless he adds "without recourse" for the payment of the note, if the maker fails to pay it when due.

81. *What is an indorsement in full?*

It is one in which the indorser limits the payment of the note to some particular party.

82. *What is meant by the renewal of a note?*

When the maker of a note can not pay it when it matures, oftentimes the holder consents to a renewal by receiving a new note for such a sum as when discounted will net the amount due on the old note.

83. *What is a draft?*

A draft is an order from one bank or mercantile house to another to pay a specified sum of money to a third party.

84. *Give terms applied to the person who writes the draft, the one to whom the draft is made payable, and the one on whom the draft is drawn.*

Drawer, drawee, payee.

85. *What is a bill of exchange?*

A request, or order, from one bank or commercial house to another for the payment of money to a third

person named or to his order. It is frequently called a draft.

86. *What is a check?*

A written order for money, drawn on a bank, banker, or bank cashier, payable on demand without interest, to the person named therein, or to his order, or to bearer. The word is now generally spelled "cheque."

87. *How does one certify a bank check?*

By stamping, or writing across its face, Good, when properly indorsed, for $——.

Cashier or Teller.

88. *Of what use is a certified bank check?*

It guarantees the genuineness of the signature of the maker, and also that there are sufficient funds on deposit to the credit of the drawer to pay the face of the check.

89. *What is a certificate of deposit?*

A written instrument issued by a bank certifying that the person named therein has deposited a certain sum of money to the credit of himself, or some other person, payable when said certificate, properly indorsed, is returned.

90. *What is a clearing house?*

A place where bankers meet and make daily settlements with each other, by paying and receiving the difference between their accounts which arises from the checks drawn by the depositors of the various banks.

91. *Is the bank debited or credited when a check is drawn on it?*

Credited.

92. *Is cash debited or credited, when cash, or its equivalent is received?*

Debited.

93. *What is meant by the acceptance of a bill or draft?*

It is a promise made by the drawee, when the bill is presented, to pay it at maturity. The draft then becomes equivalent to a promissory note.

94. *What is a protest?*

A statement in writing, made by a notary public, at the request of the holder of a note, notifying the maker and the indorser of its non-payment when due.

95. *What is a bill?*

A bill is a written statement from the creditor to the debtor, specifying the nature and amount of the debt and when incurred.

96. *Make a bill in proper form, and receipt it.*

Medford, Mass., May 11, 1899.

John William Jay

Bought of White & Smith.

May	2	*100 bbls. Flour @ $6.50,*	$650	00
"	6	*50 " " @ $5.90,*	295	00
"	9	*100 " " @ $9.00,*	900	00
		Received Payment,	$1845	00
		White & Smith.		

97. *What is an account current?*

An account current is a running, or unsettled account. It is sometimes used to show only the debtor side of the account, each party rendering to the other an account of his debits only.

98. *Write a draft in proper form.*

NO PROTEST.

$_____ *Boston, Mass.,* _____ *189*_

_____ *Pay to the order of* The Berkshire National Bank

_____ *Dollars, Value received, and charge the same to account of*

To _____ _____

_____

99. *What are days of grace?*

The time allowed (three days) by law after the maturity of a bill before it must be paid. It is not allowed in every State.

100. *What is a due bill?*

A written or printed acknowledgment of indebtedness, signed by the debtor.

101. *Write a due bill in proper form.*

$60.00 *Boston, Mass., Dec. 4, 1899.*

Due to Edgar J. Thomson, on demand, Sixty Dollars, with interest from date at 6 per cent, until paid.

William Burt.

QUESTIONS AND ANSWERS

ON

DRAWING.

---

1. *What is the aim of drawing?*

The aim of drawing is to secure culture through the senses by which we apprehend the forms of things.

2. *What are the ends to be secured?*

A sensitiveness to beauty, an intelligent appreciation of beautiful things, the power to make them beautiful, and to reveal beauty to others.

3. *How can such ends be secured?*

A course in drawing must be shaped upon the broadest lines; beginning with the simple ideas and crude tastes of the child, it should develop his latent powers to the utmost.

4. *In early education which should precede, the study of form or of color? Why?*

Color. The element of interest must be brought into this study, and it is believed that color is more interesting than form. Moreover, it is believed that children notice masses of color before they pay attention to form.

5. *Should the study begin with objects? If so, with what objects, natural or artificial?*

It should begin with natural objects. Plant forms are the best.

6. *What apparatus is necessary in the study of color?*

A prism, pigments, colored paper, brush, colored crayons, etc.

7. *What are the ends to be worked for in the first study of color?*

The habit of observing color, refinement of the color sense, appreciation of harmonious coloring, intelligent appreciation of natural beauty and power to express it, appreciation of beauty in ornament and power to express it.

8. *As the study of color progresses, what points should be introduced?*

The spectrum should be studied with the tints and shades of the seven standard colors, scales of tones, groups of analogous colors, analogous harmony, complementary colors, effects of juxtaposition, etc.

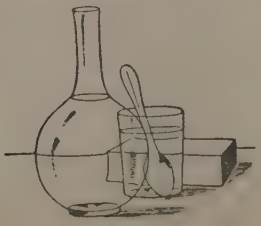
9. *Upon what is form study based, and how applied?*

Upon the study of geometrical solids and all that pertains to them, surface, lines, etc. By studying forms in nature and the arts similar to these type forms.

10. *Considered with reference to perspective elements, what should be the first results of form study?*

A habit of imaging clearly the shapes of things, knowledge of space relations, appreciation of the phenomena of appearance, and power to express them correctly.

11. *Give illustration of pictorial drawing?*



12. *What is the object of pictorial drawing in its early stages?*

The power to draw freely and effectively, and appreciation of the elements of composition.

13. *Define free-hand drawing.*

It is drawing produced by the hand and guided by the eye without the use of any auxiliary instruments.

14. *State how a decorative drawing differs from a picture.*

It differs in that its purpose is to give pleasure by beautifying the object to which it is added, while the purpose of a picture is to give pleasure in itself.

15. *Mention points to be remembered in decorative design.*

Beauty is the ultimate aim in decorative design. Fitness to purpose is an underlying principle of decoration. That which is used for decoration should not be of more importance than the object decorated, and should not detract from the usefulness of the object.

16. *Define unit of design.*

A part repeated to form a design is called a unit of that design.

17. *What are the sources of materials for decorative design?*

Geometrical figures and natural forms.

18. *Define conventionalization.*

Keeping the general characteristics of a natural form, omitting details and accidents of growth, is called conventionalization.

19. *What are the elementary principles of arrangement for decorative purposes?*

Symmetry, repetition, and alternation.

20. *Give illustration of arrangement of natural unit in decorative design.*

21. *In drawing from objects, should mechanical directions be followed?*

It is better to sketch and critically compare with the object again and again rather than to follow detailed directions.

22. *How much practice should there be in drawing geometric forms?*

Practice should be given until the figures and their details can be drawn from memory.

23. *Illustrate the drawing of an object involving the oval.*

24. *What is perspective drawing?*

Perspective drawing is the representation of an object presenting the same appearance as the object itself.

25. *Why does the appearance of an object differ from the reality?*

Because of its position and distance from the observer. Position affects the apparent form of an object and distance the apparent size.

26. *State the principle of perspective.*

Lines parallel to the picture plane retain their direction in perspective. Lines not parallel to the picture plane appear to converge as they recede from the eye. All horizontal lines not parallel to the picture plane vanish at the level of the eye.

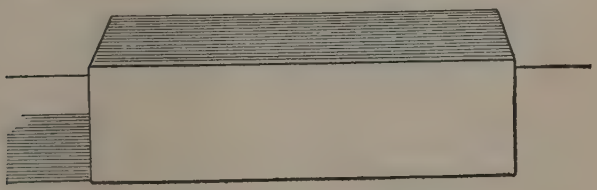
27. *What is the vanishing point?*

The point toward which any set of parallel lines converges.

28. *What is fore-shortening?*

It is the representation of objects pointing more or less directly toward the spectator standing away from a plane perpendicular to the spectator's line of sight, but shown in such a manner as to convey to the mind the impression of their just length.

29. *Give illustration involving one set of retreating parallels.*



30. *Upon what does unity in a group depend?*

Upon the relations between objects as to kind, size, position. Upon emphasis of principal object and subordination of details. Upon concentration of interest by means of leading lines and action or movement.

31. *Upon what does the harmony of a group depend?*

Upon the balance of one mass with another or upon the relations of its principal lines.

32. *What is composition in drawing?*

It is the choice and arrangement of objects for the purpose of arranging them pictorially with special reference to beauty of effect.

33. *Give meaning of light and shade as applied in drawing?*

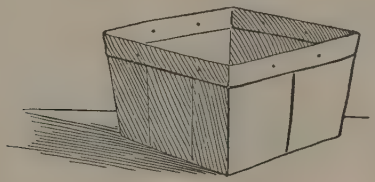
It is the result produced by representing in a drawing

the effect of light, shade, and shadow. Light is usually assumed to come from above and the left. In this case the shadows would be on the right side and the lower part also.

34. *What is a view?*

It is a drawing showing the facts of form.

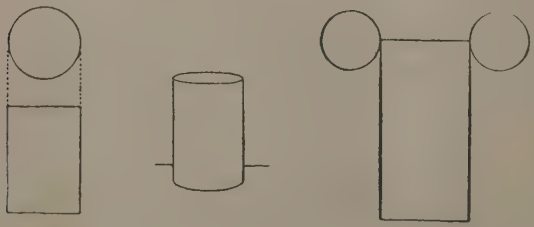
35. *Illustrate by a view in light and shade.*



36. *Define constructive drawing.*

Constructive drawing is that branch of the subject which gives the facts of objects, and from which objects may be constructed.

37. *Give example of working and pictorial drawing and developed pattern of cylinder.*



38. *What is a bilateral form?*

It is one having an axis of symmetry, that is, one that may be divided into two parts that balance.

39. *Illustrate bilateral form.*

40. *Define style in drawing.*

Style means character. Every style depends upon what is peculiar to it, never on what it has in common with other styles.

41. *What are the leading styles of historic ornament?*

Ancient { Egyptian, Greek, Roman } Mediæval { Byzantine, Saracenic, Gothic }

Modern { Renaissance.

42. *Mention some of the characteristics of Greek style.*

Estheticism, artistic finish, simplicity, conventionalization.

43. *What are the peculiarities of the Saracenic style?*

Rigid exclusion of symbolism, geometric symmetry and gorgeous color effects.

44. *What is meant by the Renaissance?*

It is the style that has prevailed during the last five centuries. It is a re-birth of classic styles and estheticism.

45. *What is necessary to an intelligent appreciation of the works of art?*

The study of the best pictures.

46. *What is industrial drawing in its broadest sense?*

It includes mechanical and free-hand outline drawing, light and shade, and color, from both artificial and natural objects, and structural, decorative, and pictorial designs. The scope of modern manufacture allows no element in drawing to be eliminated.

47. *Give sketch of outdoor perspective.*

QUESTIONS AND ANSWERS

ON

ALCOHOL AND TOBACCO

AND THEIR EFFECTS UPON THE HUMAN SYSTEM.

---

1. *How and by whom was alcohol discovered?*

It is said that Paracelsus, a chemist of the fourteenth century, accidentally discovered alcohol, and upon testing its power boasted of having found the essence of life, the power to cure the weak, and the great benefactor of mankind.

2. *What is alcohol?*

A liquid obtained from the fermentation and distillation of fruits and grains.

3. *What must be the condition of fruits or grains to produce alcohol?*

They must pass into a stage of decomposition or rot. This occurs only where sugar or starch is one of the ingredients.

4. *What are the chemical properties of alcohol?*

It will not freeze; it burns without smoke; it readily dissolves gums and oils and forms various mixtures; it is used in preserving meats, in perfumery, in thermometers, in varnishes, in spirit lamps, in medicines, and in the practice of various arts.

5. *How does alcohol preserve meats, insects or animals?*

It absorbs the water in them and prevents decay.

6. *What are the beverages most largely composed of alcohol?*

Whiskey, brandy, rum and gin. These are the principal forms of distillations, although scores of mixtures are formed.

7. *What are some of the beverages not so largely composed of this fluid?*

Wine, beer, ale and cider.

8. *What is the difference between alcohol and whiskey?*

Alcohol is the pure spirit, too strong for human drink, while whiskey is alcohol doctored to meet the taste.

9. *What is intoxication?*

Drunkenness, paralysis of the brain, a condition of mental stupor.

10. *What is the difference between food and alcohol?*

Food nourishes and sustains the body; alcohol excites the nervous system, clouds the intellect, poisons the blood and injures the body.

11. *What is the difference between fermentation and distillation?*

Fermentation is a simple process of nature in the juices of fruits and grains. Distillation is the process of taking out the alcohol found in fermentation.

12. *What is a still, and how does it work?*

A boiler in which a liquid containing alcohol is placed. The alcohol rises in a vapor, which is carried by a tube through a cask of cold water and condensed, passing out of the tube in a liquid form stronger than the one boiled.

13. *What is the worm of the still? What is the worm-tub?*

The worm is the tube before mentioned which, in passing through the cold water, is coiled spirally, like a worm, in order to have a greater surface for cooling. The worm-tub is the cask holding the tube or worm.

14. *What are malt liquors?*

Those manufactured from malt and hops; they are beer, ale and porter.

15. *How is malt made?*

By placing a quantity of wet barley in a warm room and allowing it to sprout, after which it is dried in a furnace and ground.

16. *What parts of the body are affected by the use of alcohol?*

The stomach, the heart, the liver, the lungs, the muscles, the blood, the brain, the skin, the bones — in fact, every part of the body.

17. *Give the circulation of alcohol in the body.*

After being taken into the stomach the organs reject it as of no use in nourishment, and it is absorbed by the veins and carried to the liver, which in turn forces it on to the heart; thence it is driven to the lungs, and by the action of the atmosphere a large proportion is drawn off with the breath and the body is relieved from the poison which it could not use, but a part of this fiery fluid which does not escape is carried by the blood to the brain, where it produces excitement, madness and stupefaction.

18. *Is there any nourishment in alcohol?*

None whatever. Its immediate effect is to quicken pulsation and arouse the vital forces of the body.

19. *How does this fluid assist in restoring the low pulsation of an invalid?*

It quickens immediately the vital forces, and by the use of medicines or nourishments the system is sustained, otherwise the excitement would die out and the system would fall to a lower standard than before taking the stimulation.

20. *What does alcohol do to the stomach?*

It prevents the proper action of the gastric juice on the food taken for nourishment.

21. *What experiment will prove this assertion?*

Take some of the juice from the stomach of a calf which has just been killed, and mix alcohol with it, and you will notice a chemical action upon the pepsin, which prevents its work upon the food. In other words, the food is preserved until the stomach can throw it off and begin digestion.

22. *How is this proved by actual experience in man?*

Some men were paid their week's wages just after dinner on Saturday. They got drunk and remained so until the next day at noon. On coming back to consciousness they were very sick, and an emetic was given to them which brought up their Saturday's dinner just as it had gone into their stomachs. The food had been preserved by the alcohol, and relief could come only by vomiting.

23. *Why do some people take a glass of liquor before eating?*

Simply to gratify their taste. The plea of improving the appetite is only an excuse to cover up a practice in which they wish to indulge.

24. *What disease is liable to attack the person who continues drinking alcoholic beverages?*

Dyspepsia.

25. *What effect do contagious diseases have upon habitual drinkers, and why?*

The mortality is especially great in cases of cholera and yellow fever. The reason is that the body is not in condition to battle with disease. The stomach, kidneys, liver, and lungs are weak, the blood is poisoned and the reagent force of the constitution wrecked.

26. *What causes the redness of the nose and skin?*

The skin is called into greater action to throw off a part of the alcohol taken into the system. The pores and blood-vessels of the skin become larger in this exertion, and the quantity of blood gives the color.

27. *What does alcohol do to the heart?*

It overworks it, makes it tired, loads it with fat and weakens the power of action.

28. *What does it do to the blood-vessels?*

It stimulates the circulation, hurries the blood in its course, stretches the small arteries and makes them unfit for work.

29. *How does it act upon the lungs?*

It causes them to work too fast, heats and inflames them, hardens the walls of the air-cells, and prevents the air from purifying the blood.

30. *How does it affect the brain?*

Parts of the nerves, spinal cord and brain are composed of a white substance called albumen; when alcohol comes into contact with this substance it absorbs the water and thickens the albumen, which action paralyzes these organs so that they lose their power of action, the limbs cannot carry the body, and the brain refuses to understand.

31. *Why does a drunken man have imperfect vision?*

The nerves of the eye are strained by the excitement and stupor, and do not report to the brain a correct vision.

32. *How does alcohol injure the liver?*

By hardening and preventing its action in removing the waste matter which should be carried off.

33. *How does it affect the kidneys?*

They become fatty and waxlike, and this condition leads to dropsy and other forms of degeneration.

34. *How does it injure the mind?*

Whatever injures the brain weakens the power of thought and destroys the intellect.

35. *How do we know that alcohol is a poison?*

If taken in sufficient quantities it almost immediately produces death. In such cases the animal has all the appearance of poisoning. Nature declares that it is a poison, although by habitual but moderate use the system becomes accustomed to its presence, holding in check the slow fire which is impairing the constitution, producing a poisoned blood, diseased kidneys, indigestion and the slow destruction of the mind, the brain, the heart and the nerves.

36. *Do habitual drinkers crave the taste of liquors?*

It is often the case that the first glass in the morning is hard to swallow; it is nauseating to the stomach, and can be endured only by bracing the physical powers. The drink is taken for the effect, no longer for the pleasure of the palate. There is a demand for something to arouse the sinking forces, to stimulate, to overcome the deadness of the heart and to produce a new excitement.

37. *Does alcohol protect from cold?*

It imparts warmth only by imagination. No new heat is infused into the system, but by quickened pulsation the blood is forced rapidly over the body, and whatever heat is imparted to the outer surface is at the general expense of the internal heat; and when the pulsation returns to its

normal rate the body has lost more heat and has become weaker than it would have been if the excitement had not been given.

38. *What is the experience of sailors in cases of shipwreck and great exposure?*

Those who take liquor under these circumstances do not withstand the cold as well as those who refuse to drink.

39. *How could alcohol be used under such circumstances and become a benefit to those exposed?*

By turning it into their boots or against the parts liable to freeze. This would be a means of outward protection by which the internal forces would not be disturbed.

40. *Knowing the evil effects of drink, why do people continue to harbor its presence, protect its sale and defend its influence?*

This is a mystery which has still to be explained, but the fact remains that the influence of liquor is increasing, its effects are more dangerous, and its power more grasping. It is not, however, in as general private use in homes and residences as it was some generations ago. Again, wines and beer have taken the place of the more potent liquids.

TOBACCO.

41. *When was tobacco discovered and when introduced to the people of civilization?*

It was discovered by Columbus in 1492. It was taken to Spain in 1496; to France in 1560; to England in 1586.

42. *What is the difference in effect between alcohol and tobacco?*

One excites, while the other soothes the nerves and often produces sleep.

43. *What poisonous elements are found in tobacco smoke?*

Carbonic acid, carbonic oxide, ammonia and nicotine.

44. *What is the effect of carbonic acid?*

It causes sleepiness and headache.

45. *What is the effect of carbonic oxide?*

It causes trembling of the muscles and heart.

46. *What effect does ammonia produce?*

It bites the tongue and makes too much work for the salivary glands.

47. *What is nicotine?*

It is a very poisonous element, strong in odor and bitter to the taste, and is the principal pain-soothing and sleep-producing element of tobacco. It is a narcotic.

48. *What effect does nicotine produce?*

It produces weakness, nervousness, dizziness, nausea, faintness, loss of strength, and stupor, and, if taken in large quantities, convulsions and death.

49. *Give some of the actions of tobacco on the human body.*

It taints the saliva; injures the sense of smell, taste, sight and hearing; causes "smokers' sore throat;" injures the stomach, causing dyspepsia, etc.; often takes away the appetite for wholesome food; irritates the air-cells of the lungs; causes palpitation of the heart; weakens the muscles, causing trembling; injures the eyes and stupefies the brain and nerves.

50. *Give some account of its action on the mind.*

It makes the memory poor; lessens the power to think; weakens the will; makes people grow in selfishness and impoliteness; often leads to bad company; and sometimes causes insanity.

51. *What mode of using tobacco is most injurious?*

The habit of smoking cigarettes, because they contain

an inordinate amount of nicotine, refuse matter and often opium or narcotic extracts.

52. *What is opium?*

It is the juice obtained from the seed-vessel of the white poppy before it is ripe. When dried, it is somewhat dark in color and bitter to the taste.

53. *Is it dangerous to use?*

It is the most dangerous of drugs when used habitually, as few can resist its influence when once the system has become accustomed to it. Its first effects are pleasant and exhilarating, but it afterward produces a misery which can be relieved only by another potion; thus the habit becomes a cruel and unrelenting slavery.

54. *What are laudanum and morphine?*

They are products of opium, and should be used only under the orders of a physician.

55. *What is hashish?*

A powerful narcotic, prepared from the hemp plant grown in hot countries. It is used extensively among the people of warm climates, and is a terribly exciting poison.

56. *What is the areca nut, and where is it found?*

It is the seed of a kind of palm, and resembles a nutmeg. It is mixed with quick-lime and wrapped in a betel-leaf, which grows on a vine belonging to the pepper family. The mixture reddens the saliva and lips and blackens the teeth. It is chewed by millions of people in India.

QUESTIONS AND ANSWERS

ON

CIVIL GOVERNMENT.

1. *What is a Constitution?*

The established form of government of a state, kingdom or country.

2. *What is a preamble?*

A formal and explanatory introduction.

3. *What are legislative powers, and where are they vested in the United States?*

The right to make laws; this right is vested in a Congress of the United States.

4. *What is the Senate?*

The upper branch of Congress.

5. *What is the House of Representatives?*

The House of Representatives is the lower branch of Congress.

6. *How are Senators and Representatives elected, and for how long a term?*

Senators are elected by the legislatures of the States for a term of six years, each State being entitled to two Senators; Representatives are elected by the people for a term of two years, each State being represented according to its population.

7. *How old must a Representative be, and how long a citizen of the United States?*

Twenty-five years old, and seven years a citizen.

8. *What is an elector?*

A citizen entitled to vote.

9. *What is a census?*

An official enumeration of the people, with the statement of their property, pursuits, age, etc.

10. *How often is it taken, and what important purpose does it serve?*

It is taken once in ten years, and each census furnishes a new basis of apportioning the number of Representatives to the several States.

11. *If vacancies happen in the representation of any State, how are they filled?*

By the executive authority of the State.

12. *What is a writ of election?*

A writing issued to an officer or officers to give notice of an election to be held.

13. *How does the House of Representatives organize itself for work?*

By electing a speaker and other officers.

14. *What sole power has this branch of Congress?*

That of impeachment.

15. *What is impeachment?*

An accusation or charge brought against a public officer for misconduct in office.

16. *Into how many classes are the Senators divided?*

Three, one class being elected every two years.

17. *Who is president of the Senate? Can he vote?*

The Vice-President of the United States presides over the Senate, and may vote only when the Senate is equally divided.

18. *Should a vacancy occur in the Senate, what is to be done?*

The executive of the State may make a temporary appointment, until the next meeting of the legislature.

19. *How old must a Senator be, and how long a citizen of the United States?*

Thirty years of age and nine years a citizen.

20. *Who becomes president of the Senate when the Vice-President is absent?*

The Senate elects one *pro tempore.*

21. *What sole power belongs to the Senate?*

That of trying all impeachments.

22. *How may the President of the United States be punished for misdemeanor in office?*

He may be impeached by the House of Representatives, and tried by the Senate, the Chief Justice presiding. The conviction shall be by the concurrence of two-thirds of the Senators present.

23. *What judgment can the Senate declare against a convicted President?*

His punishment cannot extend beyond removal from office, and disqualification to hold any office of honor, trust or profit under the United States.

24. *If an officer is removed from office by an impeachment trial, is he subject to the common law?*

He is liable and subject to indictment, trial, judgment, and punishment, according to law, if the offence is criminal.

25. *What is a judgment? What is an indictment?*

A judgment is the sentence pronounced by the judge or court by whom a person is tried. An indictment is a written accusation of crime made by a grand jury.

26. *What are an oath and an affirmation?*

An oath is a solemn declaration, made with an appeal to God as to the truth of what is stated. An affirmation is a solemn declaration, made by one who is unwilling to take an oath.

27. *What officers does the Senate choose?*

All its officers except its president.

28. *What is the meaning of pro tempore?*

"For the time being."

29. *Who appoints the times, places, and manner of holding elections of Senators and Representatives?*

They are prescribed in each State by the legislature thereof; but Congress may at any time by law make or alter such regulations, except as to the places of choosing Senators.

30. *If disputes arise in election returns, how are they to be decided?*

Each house is judge of the elections, returns, and qualifications of its own members.

31. *How many does it require to do business?*

A majority; but a smaller number may compel the attendance of absent members, in such manner and under such penalties as each house may provide.

32. *What power has each house over its members?*

It may punish them for disorderly behavior, and, with the concurrence of two-thirds, expel a member.

33. *Can either house adjourn at pleasure?*

Not for more than three days, without the consent of the other house.

34. *Must each house keep a record (or journal) of its proceedings?*

It must, in the form of a journal, which shall be printed unless secrecy is required.

35. *When shall the yeas and nays be entered on the journal?*

When one-fifth of those present require it.

36. *When shall Congress assemble?*

On the first Monday in December; but it may be convened by the President, when necessary, or Congress may adjourn from time to time.

37. *How do members receive compensation?*

The amount is fixed by law; and it is paid out of the treasury of the United States.

38. *May a member be arrested while Congress is in session?*

Only for felony, treason, or breach of the peace.

39. *How is the privilege of free speech preserved to members of Congress?*

No member may be questioned in any other place as to any speech or debate in Congress.

40. *Can a person hold an office under the United States and be a member of Congress?*

He can not.

41. *Where shall bills for raising revenue originate?*

In the House of Representatives.

42. *What is revenue, and what is a bill?*

Revenue is the income of government, arising from taxes,

duties, etc. A bill is a formal writing presented to a legislature for enactment into law.

43. *How does a bill become a law?*

By passing both houses of Congress, and receiving the sanction of the President, or by being retained by him, without action, for ten days; but if returned within ten days, Sundays excepted, with his objections, it does not become a law, unless reconsidered and passed by a two-thirds vote of both houses.

44. *What question does not require the sanction of the President?*

The question of adjournment, except in case of disagreement between the two houses with respect to the time of adjournment, when the President may adjourn them to such a time as he shall think proper.

45. *What are the powers of Congress?*

According to Section 8 of the Constitution, "The Congress shall have power to lay and collect taxes, duties, imposts, and excises, to pay the debts and provide for the common defense and general welfare of the United States, but all duties, imposts, and excises shall be uniform throughout the United States; to borrow money on the credit of the United States; to regulate commerce with foreign nations, and among the several States, and with the Indian tribes; to establish a uniform rule of naturalization, and uniform laws on the subject of bankruptcies throughout the United States; to coin money, regulate the value thereof, and of foreign coin, and fix the standard of weights and measures; to provide for the punishment of counterfeiting the securities and current coin of the United States; to establish post-offices and post-roads; to promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries; to constitute

tribunals inferior to the Supreme Court, to define and punish piracies and felonies committed on the high seas, and offenses against the law of nations; to declare war, grant letters of marque and reprisal, and make rules concerning captures on land and water; to raise and support armies, but no appropriation of money to that use shall be made for a longer term than two years; to provide and maintain a navy; to make rules for the government and regulation of the land and naval forces; to provide for calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions; to provide for organizing, arming, and disciplining the militia, and for governing such part of them as may be employed in the service of the United States, reserving to the States respectively the appointment of the officers, and the authority of training the militia according to the discipline prescribed by Congress; to exercise exclusive legislation, in all cases whatsoever, over such district (not exeeding ten miles square) as may, by cession of particular States, and the acceptance of Congress, become the seat of government of the United States, and exercise like authority over all places purchased by the consent of the legislature of the State in which the same shall be, for the erection of forts, magazines, arsenals, dock-yards, and other needful buildings; and to make all laws which shall be necessary and proper for carrying into execution the foregoing powers and all others vested by this Constitution in the government of the United States, or any department or officer thereof."

46. *What is meant by the law of nations?*

The law of nations, the accepted or universal laws of all nations.

47. *What are letters of marque and reprisal?*

Written authority from the government to seize the property of an enemy, especially vessels and cargoes.

48. *What are duties, imports, and excises?*

A duty is a tax levied on imports. Imports are goods brought from other countries. Excises are taxes on anything made, used, or sold.

49. *What is the militia?*

The organization of citizens of a State liable to military duty and enrolled for service.

50. *Over what district may Congress exercise exclusive legislation?*

The District of Columbia.

51. *What are forts, magazines, arsenals, and dockyards?*

A fort is a place of military defense. A magazine is a store where ammunition is kept. An arsenal is a repository for arms and military stores. A dockyard is a place containing all kinds of naval stores and timber.

52. *What is the writ of habeas corpus, and when can it be suspended?*

The writ of *habeas corpus* is a legal process for delivering a person from false imprisonment, and can be suspended only in cases of treason or when the public safety requires it.

53. *What is a bill of attainder?*

A special act of the legislature inflicting capital punishment upon persons supposed to be guilty of high crimes, without process of law, and involving forfeiture of his estates and the permanent dishonor of his name. It is not allowed by the Constitution of the United States.

54. *What is an ex post facto law?*

A law making an act criminal which was not such when committed, or increasing its penalty in like manner. This is not allowed, either.

55. *May a tax or duty be laid on articles exported from any State?*

No.

56. *How about titles of nobility and the receiving of presents?*

No title of nobility shall be granted by the United States; and no person holding an office of profit or trust under them shall, without the consent of Congress, accept of any present, emolument, office or title of any kind whatever, from any king, prince or foreign state.

57. *May any State enter into any treaty, alliance, or confederation?*

No.

58. *May a State engage in war?*

Not unless in imminent danger from invasion.

59. *What are the States forbidden to do in regard to imposts?*

No State may, without an act of Congress, lay any imposts or duties on imports or exports, except what may be absolutely necessary for executing its inspection laws.

60. *In whom is the executive power of the United States vested?*

In a President.

61. *Who is eligible to this office?*

Any citizen born in the United States, thirty-five years of age, and fourteen years a resident.

62. *How are the President and Vice-President elected?*

By Electors chosen by the people. The Electors meet in their respective States and vote by distinct ballots for President and Vice-President. These votes are sealed and transmitted to the seat of government of the United States, directed to the president of the Senate. The president of

the Senate, in the presence of the Senate and House of Representatives, opens all the certificates, and the votes are then counted; the person having the greatest number of votes for President shall be President, if such number be a majority of the whole number of Electors appointed; and if no person have such majority, then from the persons having the highest number, not exceeding three, on the list of those voted for as President, the House of Representatives shall choose immediately, by ballot, the President. The person having the greatest number of votes as Vice-President shall be the Vice-President, if such number be a majority of the whole number of electors appointed, and, if no person have a majority, then from the two having the highest numbers on the list the Senate shall choose the Vice-President.

63. *Supposing the House of Representatives fail to elect a President when the right of choice devolves upon it, who shall act as President?*

The Constitution provides that the Vice-President shall act as President in the case of the death or other disability of the President.

64. *What may Congress determine in regard to the time of choosing the Electors?*

Congress may determine the time of choosing the Electors, and the day on which they shall give their vote, which day shall be the same throughout the United States.

65. *How is the President compensated for his services?*

The President shall, at stated times, receive for his services a compensation which shall neither be increased nor diminished during the period for which he shall have been elected, and he shall not receive within that period any other emolument from the United States, or any of them.

66. *What oath must he take before he enters upon the execution of his office?*

"I do solemnly swear (or affirm) that I will faithfully

execute the office of President of the United States, and will, to the best of my ability, preserve, protect, and defend the Constitution of the United States."

67. *Who is commander-in-chief of the army and navy?*

The President.

68. *What offenses is he not permitted to pardon?*

Cases of impeachment.

69. *What especially high privileges does he enjoy?*

He has the right, with the advice and consent of the Senate, to make treaties, provided two-thirds of the Senators present concur, and with the advice and consent of the Senate he shall appoint ambassadors, ministers, judges, and officers of the United States, and all appointments which shall be established by law.

70. *If a vacancy in an appointive office occurs during a recess of Congress, how is it filled?*

By an appointment by the President.

71. *What is the President's message?*

A paper addressed to Congress, stating the condition of the country, and proposing such measures as he may judge necessary and expedient.

72. *For what crimes can the President, Vice-President, and all civil officers of the United States be impeached?*

Treason, bribery, and other high crimes and misdemeanors.

73. *What is treason?*

Treason against the United States shall consist only in levying war against them, or in adhering to their enemies, giving them aid and comfort.

74. *What is bribery?*

Bribery is giving money or some other valuable consider-

ation to procure desired legislation, a judicial decision, or other official action.

75. *In what is the judicial power of the United States vested?*

In a Supreme Court and such inferior courts as Congress may from time to time establish.

76. *How long do the judges of the Supreme Court hold office?*

During life or good behavior.

77. *To what cases does their power extend?*

To all cases arising under the Constitution, the laws of the United States, and cases that cannot be settled in the Supreme Court of any State.

78. *In what cases has the Supreme Court original jurisdiction?*

In all cases affecting ambassadors, other public ministers and consuls, and those to which a State shall be a party. In other cases the Supreme Court has appellate jurisdiction, or jurisdiction by an appeal from the lower courts.

79. *Where shall a criminal be tried?*

In the State where the crime is committed.

80. *If the crime is not committed in the United States, where must the trial be held?*

At such a place or places as Congress may by law have directed.

81. *What crimes are not tried by jury?*

Crimes subject to impeachment.

82. *What power declares the punishment of treason?*

Congress; but no person shall be convicted of treason unless on the testimony of two witnesses to the same overt act, or on confession in open court.

83. *What is meant by "No attainder of treason shall work corruption of blood or forfeiture, except during the life of the person attainted"?*

That the relatives of the person convicted shall not be denied any rights because of his conviction.

84. *What credit shall be given in each State to the acts of every other?*

Full faith and credit must be given in each State to the public acts, records, and judicial proceedings of every other State.

85. *Can a person charged with crime in one State be taken from another State?*

Only on demand of the executive authority of the State where the crime was committed.

86. *How are new States admitted into the Union?*

By consent of Congress.

87. *How can new States be formed?*

From Territories having 30,000 inhabitants, or from States or parts of States with the consent of those States.

88. *What power has Congress in regard to the territory and other property belonging to the United States?*

It has power to dispose of, and make all needful rules and regulations respecting it.

89. *What shall the United States guarantee to every State in the Union?*

A republican form of government and protection.

90. *What is the supreme law of the land?*

The Constitution and laws of the United States. All government officers and representatives are bound by oath to support it.

91. *Are religious tests permitted?*

No religious test shall be required as a qualification to any office or public trust under the United States.

92. *How may the Constitution be amended?*

By two-thirds vote of both houses of Congress, or by the action of the legislatures of two-thirds of the States, ratified in either case by three-fourths of all the States.

93. *How many amendments have been made to the Constitution, and when were the first ten adopted?*

Fifteen; the first ten were adopted at the first session of Congress.

94. *What did Congress grant in the first amendment to the Constitution?*

Freedom of religion, of speech, of the press, and the right of the people peaceably to assemble and petition the government for a redress of grievances.

95. *What privilege was given the States in the second amendment?*

The right of the people to keep and bear arms.

96. *What is the law respecting the quartering of soldiers in any house in the time of peace?*

No soldier shall, in the time of peace, be quartered in any house without the consent of the owner, nor in time of war, save in a manner to be prescribed by law.

97. *What rights are secured to the people in the fourth amendment?*

The right to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures.

98. *Can a person be twice put in jeopardy of life or limb?*

No.

99. *Can a person be compelled to be a witness against himself?*

He can not.

100. *What is the law respecting the taking of private property?*

If taken for public use, the owner shall have just compensation.

101. *By the sixth amendment, what rights shall the accused enjoy in all criminal prosecutions?*

The right to a speedy and public trial, by an impartial jury; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the assistance of counsel for his defense.

102. *When shall the right of trial by jury be preserved?*

In suits at common law, where the value in controversy shall exceed twenty dollars.

103. *What must not be required, or imposed, or inflicted, by the eighth amendment?*

Excessive bail must not be required, or excessive fines imposed, or cruel and unusual punishment inflicted.

104. *By the tenth amendment, what powers are reserved to the States respectively, or to the people?*

The powers not delegated to the United States by the Constitution, or prohibited by it to the States.

105. *What does the thirteenth amendment prohibit?*

Slavery or involuntary servitude, except as a punishment for crime, whereof the party shall have been duly convicted.

106. *By the fourteenth amendment, who is forbidden to hold certain offices?*

Persons who have held office under the United States, or any State, and have been engaged in insurrection or rebellion against the same, or given aid or comfort to the

enemies thereof. But Congress may, by a vote of two-thirds of each house, remove such disability.

107. *What is said of the public debt?*

The validity of the public debt of the United States, authorized by law, shall not be questioned. Any debt or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave, shall be held illegal and void.

108. *What does the fifteenth amendment provide?*

That the right of the citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color or previous condition of servitude.

109. *What two important measures were passed by the 48th and 49th Congresses to remedy a possible defect in the Constitution?*

A law providing rules for counting the Electoral vote, and a Presidential succession law.

110. *What is the law in regard to the Presidential succession?*

"In case of removal, death, resignation, or inability of both the President and Vice-President, a member of the Cabinet shall, in the following order, act as President until the disability is removed or a President elected: The Secretary of State, Secretary of the Treasury, Secretary of War, Attorney General, Postmaster General, Secretary of the Navy, Secretary of the Interior; provided, that whenever the powers or duties of the office of President of the United States shall devolve upon any of the persons named therein, if Congress be not then in session, or if it would not meet in accordance with law within twenty days thereafter, it shall be the duty of the person upon whom the said powers and duties shall devolve, to issue a proclamation convening Congress in extraordinary session, giving twenty days'

notice of the time of meeting." This act was approved January 19, 1886.

111. *What legislation has since been enacted to facilitate the work of the Supreme Court of the United States?*

An act of Congress, passed early in 1891, required the President to appoint an additional judge in each of the nine United States circuits. This judge, with the circuit judges and the Judge of the Supreme Court for that district, constitute a Circuit Court of Appeals, empowered to pass finally upon certain classes of cases, thus relieving the Supreme Court of the United States of much of its purely routine business.

QUESTIONS AND ANSWERS

ON

PHYSIOLOGY, ANATOMY AND HYGIENE.

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1. *What is physiology?*

The science of the organic functions of animals or plants.

2. *Show the value of knowing physiology.*

By a proper knowledge of this subject strength may be preserved, and life saved or lengthened. In case of accidents, as of poisoning, drowning, or any bodily injury, this knowledge may be of great value to us in relieving sickness and distress.

3. *Into what two classes are all bodies in nature divided?*

Into organic and inorganic bodies.

4. *Define organic bodies.*

They are those bodies which possess organs on whose actions depend their growth and perfection, like animals and plants.

5. *Define inorganic bodies.*

They are devoid of organs, or instruments of life, like the minerals.

6. *What is anatomy?*

The science of the structure of animal bodies.

7. *What is hygiene?*

That branch of medicine which treats of the preservation of health.

8. *What law is impressed on all animal beings?*

The law of continual change.

9. *What is the difference between food and living flesh?*

Food is the material we eat, changed by the action of the system into living flesh.

10. *How are plants nourished?*

By the inorganic elements found in the earth and air around them. This material is received in the form of a liquid or a gas, already prepared for their use.

11. *How are animals nourished?*

By the organic materials of vegetables or of other animals.

12. *What do animals always possess?*

A stomach or digestive cavity, in which the food is prepared before it can be absorbed by the machinery of the body.

13. *What functions are peculiar to animals alone?*

Sensation and voluntary motion; these are, therefore, called animal functions.

14. *What organs constitute the digestive apparatus?*

The mouth, pharynx, œsophagus, stomach, pancreas and intestinal canal.

15. *What differences are there in the teeth of the carnivorous and the herbivorous animals?*

The carnivorous animals have sharp front teeth, long, sharp and pointed canine teeth, and grinders with high and sharpened points. The herbivorous have short, blunt and strong front teeth and small canine teeth, but their

molars are very large, broad and flat, with slightly raised lines on their surface.

16. *How many teeth has man, and how divided?*

Sixteen in each jaw: four incisors in the centre; one canine next to the incisors on each side; then two bicuspids and three molars.

17. *Of what are teeth composed?*

Of soft bone within, but with a cover of very hard enamel which admits of an exquisitely fine polish.

18. *How are the teeth set in the jaw?*

With long fangs, so that they may not easily be started from their places.

19. *What are salivary glands?*

Glands which empty their fluid into the mouth. Their function is to secrete fluid to moisten the food during mastication, and assist digestion.

20. *Where are the salivary glands situated?*

The two larger ones, called parotid glands, are situated between the ear and upper part of the jaw. Two smaller ones, called submaxillary, are situated about half way between the symphesis, or centre. Smaller ones still, called sublingual, are underneath the tongue.

21. *Describe the pharynx, or second chamber of the mouth.*

It is separated from the mouth by the palate. Four passages open out of it: one leads forward to the mouth; a second, upward to the nose; a third, downward to the lungs; and a fourth, backward to the stomach.

22. *What is the epiglottis?*

A small valve placed over the mouth of the trachea, admitting air, but excluding all foreign substances.

23. *Describe the œsophagus.*

It is a soft, muscular tube, extending from the pharynx

to the stomach, and is about nine inches in length, and somewhat less than one inch in diameter. It is composed principally of two muscular coats; the fibres of one run lengthwise of the tube, and the fibres of the other pass around it in a circular manner.

24. *How does food find its way to the stomach?*

Upon being forced back in the mouth to the pharynx, its presence causes the muscles of the pharynx to contract upon it. This is the act of swallowing, and is beyond the control of the will. The circular fibres of the muscles of the œsophagus seize upon the morsel of food, and contracting, force it downward until it reaches the stomach.

25. *Describe the stomach.*

It is an oval sac, situated below the diaphragm on the same plane with the liver, and lies mostly on the left side of the spine. It has two openings: an upper, or cardiac orifice, where the œsophagus enters, and a lower, or pyloric orifice, which enters into the duodenum. It is composed of three coats: an outer, or serous coat, which is the same as that which lines the whole abdomen; a middle, or muscular coat, composed of two layers of fibres, longitudinal and circular, the contraction of which moves the food about the stomach during digestion; and an inner or mucous coat, containing the gastric tubules, which secrete the gastric juice.

26. *By what is food dissolved in the stomach?*

By a powerful fluid called the gastric juice.

27. *Describe the process of digestion in the stomach.*

The presence of food in the stomach causes the gastric juice to be secreted. The muscles of the stomach move the food about, which causes the gastric juice to be thoroughly intermingled with it. The gastric juice reduces the food to a pulpy mass, usually within three or four

hours, and it is then passed out of the stomach at the pyloric orifice.

28. *Of what is gastric juice composed?*

It is composed of an acid supposed to be lactic or hydrochloric acid, and an organic substance called pepsin.

29. *Name the fluids of the body.*

The blood, chyle, lymph, saliva, gastric juice, pancreatic juice, synovia, mucus, and serum. Bile, sweat, and urine are excretions.

30. *Name the solids of the body.*

The bones, teeth, cartilages, ligaments, muscles, nerves, vessels, viscera, membranes, skin, hair, and nails.

31. *Give the list of chemical elements in the human body.*

Oxygen, hydrogen, carbon, sodium, potassium, chlorine, nitrogen, sulphur, phosphorus, calcium, magnesium, fluorine, silicon, iron, and manganese.

32. *Into what classes of substances are these elements divided?*

Into metallic and non-metallic substances.

33. *Which are the metallic substances?*

Potassium, sodium, calcium, magnesium, iron, and manganese.

34. *Give the arrangement of the parts of the body.*

They are arranged into fibres, fasciculi, tissues, organs, apparatuses, and systems.

35. *Define a fibre.*

It is a thread of exceeding fineness, and may be round or flattened.

36. *Define a fasciculus.*

It is the term applied to several fibres united.

37. *What is meant by a tissue?*

The term tissue is applied to several different solids of the body.

38. *Define an organ.*

An organ is an instrument composed of tissues, and designed for action.

39. *What is the action of an organ called?*

It is called its function or use.

40. *Give an example of an organ and its functions.*

The liver is an organ, and the secretion of bile its function.

41. *Define an apparatus.*

An apparatus consists of a number of different organs for the performance of some office. The teeth, mouth, stomach, intestines, etc., belong to the digestive apparatus.

42. *Define a system.*

It is a connected series of similar parts, such as the muscular or nervous system.

43. *To what can every organ of the body be reduced?*

To a few tissues, as the cellular, osseous, muscular, mucous and nervous.

44. *What tissue is the primary form?*

The cellular or areolar tissue is regarded as the primary form of all others.

45. *How is the cellular tissue formed?*

By the crossing or interlacing of minute fibres, interwoven in every direction, so as to form a web-like membrane with innumerable small spaces, which communicate with each other.

46. *Where is the cellular tissue formed?*

In every part of the system, except in compact portions of bone, teeth and cartilage.

47. *What is the chief use of this tissue?*

To connect together organs and parts of organs which require a certain degree of motion on each other.

48. *What is its chief characteristic?*

It possesses great power of elasticity.

49. *What different names have been given to cellular tissue?*

Different ones, according to its position in the body. Where it is not exposed to the air it is called the *serous* membrane, from a fluid in it called serum. In the lining of the respiratory passages and of the alimentary canal it is called *mucous* membrane. Where it forms a covering for the body, it is called the *dermoid* membrane, or skin.

50. *Describe the osseous tissue.*

In composition and arrangement of matter, it varies at different periods of life, and in different bones. In some instances the bony matter is disposed in plates, while in other instances the arrangement is cylindrical, and again it is spongy, or porous.

51. *Describe the muscular tissue.*

It is composed of many fibres that unite to form fasciculi, each of which is enclosed in a delicate layer of cellular tissue.

52. *Describe the nervous tissue.*

It consists of soft, pulpy matter, enclosed in a sheath called *neurilema*, and consists of two substances, the one a pulpy matter, gray in color, and called *cineritious* (ash-colored), while the other is of a fibrous character and white and called *medullary* (marrow-like).

53. *What are the chief divisions of the economy of the human system, for convenience of discussion?*

Osteology, an account of the bones or framework of the system; *Myology*, an account of the muscles or the moving

power of the system; *Splanchnology*, an account of the nutritive organs; *Angiology*, an account of the circulating system of the arteries and veins; *Pneumonology*, an account of the respiratory, vocal, and calorific organs; *Chorology*, the secreting system; *Neurology*, the history of the nervous system; and *The inlets of the soul*, the senses.

54. *What is hunger?*

A sensation of want of more nutriment in the body. It is caused by the action of the blood on the terminal branches of the nerves in the mucous coat of the stomach.

55. *What are the relative positions of the stomach, lungs, liver and diaphragm?*

The lungs lie within the walls of the thorax, separated from the abdomen by a broad muscle, the diaphragm. Under the right lung, below the diaphragm, lies the liver, and to the left the stomach.

56. *To what substance is all food reduced in the stomach?*

A pulpy substance, called chyme.

57. *Does the stomach digest fatty articles of food?*

It does not; they are digested by the pancreatic and intestinal juices.

58. *What is the temperature of the stomach?*

About 100° F.

59. *Can food be digested artificially?*

It can. If food be thoroughly mixed with hydrochloric acid and pepsin, and kept at an equal temperature of 100°, it will be reduced in a few hours to a homogeneous mass somewhat resembling chyme.

60. *What three kinds of food do we need?*

Nitrogenous, carbonaceous and mineral food.

61. *What is nitrogenous food?*

That which contains much nitrogen. The most common forms are whites of eggs, lean meat, gluten and caseine.

62. *What is carbonaceous food?*

That which contains much carbon; it consists of two kinds, the sugars and the fats.

63. *Name the mineral matters which should be contained in our food?*

Limited quantities of iron, sulphur, magnesia, phosphorus, salt and potash.

64. *Could a person live on one kind of food alone?*

He could not. A person fed on starch would have nothing of which to make muscle, and if the diet was continued he would die of nitrogen starvation.

65. *State the five evil results of rapid and unwise eating.*

A lack of saliva with the food; resistance of the coarse pieces to the action of the digestive fluids; the dilution of the gastric juice; the overcrowding of the stomach and the over-stimulation of the digestive organs.

66. *Why should care be banished from the table?*

Care or grief restrains digestion. The nervous action holds the nourishing organs of the system back. But with merriment and pleasant thoughts the opposite is the case.

67. *Will a regular routine of food be beneficial?*

By a regular routine of food the appetite becomes indifferent, and long continuance generally produces a sickness from disgust.

68. *What are the principal causes of dyspepsia?*

Overtaxing the digestive organs. This may come from too much food, irregularity of eating, drinking strong drinks, etc.

69. *What is the best remedy for a bilious man?*

Work. Not to the point of physical prostration, but to such an extent that the body demands nourishment and the muscles to be recruited. Nature will then build herself up to supply this demand.

70. *What is the pyloric valve?*

It is no real valve, but simply a narrowing or contraction of the pyloric end of the stomach.

71. *How long does it take our chief articles of food to digest?*

ARTICLES	CONDITION	TIME	
		Hrs.	Min.
Apples, hard, sour.	Raw.	2	50
Apples, sweet, mellow	Raw.	1	30
Barley.	Boiled.	2	. .
Beef, fresh, rare	Roasted.	3	. .
Beef, steak	Fried.	4	. .
Bread, wheat, fresh	Baked.	3	30
Cake, sponge	Baked.	2	30
Cheese, old.	Raw.	3	30
Codfish, salt, dry.	Boiled.	2	. .
Ducks, wild.	Roasted.	4	30
Eggs, fresh.	Boiled, hard.	3	30
Eggs, fresh.	Roasted.	2	20
Eggs, fresh, whipped.	Raw.	1	30
Milk, new.	Raw.	2	15
Mutton, fresh	Roasted.	3	15
Oysters, fresh	Raw.	3	. .
Oysters, fresh	Stewed.	3	30
Pigs' feet, soused.	Boiled.	1	. .
Pork, fat and lean.	Roasted.	5	15
Pork, salted.	Raw.	3	. .
Potatoes, Irish.	Boiled.	3	30
Potatoes, Irish.	Roasted.	2	30
Rice	Boiled.	1	. .
Sausage	Broiled.	3	20
Soup, barley	Boiled.	1	30
Soup, oyster.	Boiled.	3	30
Tripe, soused	Boiled.	1	. .
Trout, fresh.	Fried.	1	30
Veal, fresh	Fried.	4	30
Venison, steak.	Broiled.	1	35

72. *What does organic food comprise?*

Nitrogenous substances; fats; compounds of carbon and hydrogen, such as sugar or starch.

73. *What does inorganic food comprise?*

Inorganic food comprises water and alkalies, such as salt, phosphates, etc.

74. *What is the first work of the stomach in digestion?*

To get rid of the greater part of the fluid which has been swallowed with the food.

75. *Into what organ does the chyme pass from the stomach?*

Into the duodenum.

76. *Describe the intestinal canal.*

It is composed of three coats, arranged in a manner similar to the stomach, and for similar purposes, the mucous coat secreting the intestinal juice, which aids digestion. It is divided into the large and small intestines; the small intestine is subdivided into the duodenum, jejunum, and ileum; and between the ileum and the large intestine is a perfect valve, which allows nothing to pass back that has once entered the large intestine from the ileum.

77. *What is the pancreas?*

A long, narrow gland, situated immediatly below and behind the stomach.

78. *What is the office of the pancreas?*

It secretes the pancreatic juice, which is emptied into the duodenum, and digests the fatty parts of food.

79. *What are the lacteal absorbents?*

Numberless minute tubules in the intestinal mucous membrane, which take up by absorption the nutriments, and convey them to the blood. These tubules join together,

forming other tubules, which again join, and this continues until all are united in the thoracic duct.

80. *What is the lacteal duct?*

The duct into which all the lacteal absorbents empty; it is sometimes called the thoracic duct. It passes upward along the spine, and empties into the left subclavian vein.

81. *What is called the lacteal system?*

The lacteal absorbents, the tubes which they form by joining together, and the lacteal duct.

82. *How is the digested food disposed?*

In the duodenum it is divided, part entering the blood-vessels, and the rest the waste.

83. *What is chyle?*

Food reduced to a whitish-colored fluid, and ready to be absorbed by the lacteals.

84. *When is a new supply of nutriment needed?*

When the lacteal absorbents have consumed the chyle and carried it into the veins, and the blood can no longer meet the demands of the wasting flesh.

85. *Will the stomach bear sudden changes in the time of eating?*

Not without some complaint. One's appetite returns at established periods; then his stomach craves food, and the gastric juice is ready to flow and dissolve it.

86. *When does the body sustain labor and exposure best?*

When it is best nourished.

87. *Why do growing youths or convalescents require more food than adults or persons in health?*

In order to meet the new conditions and supply the new wants of the system.

88. *What is the common error in regard to eating?*

That to please the palate, food not easily digested may safely be eaten, and more than the system requires.

89. *When any organ of the body is in action, what changes occur?*

The nervous force of the part is increased, and the circulation of the blood quickened, to supply the waste and support its powers.

90. *What is the office of the liver?*

To form the bile, the elements of which are separated from the blood.

91. *Where is the bile emptied?*

Through a duct into the duodenum. It serves to keep the intestinal contents in a healthy condition.

92. *Where is the spleen?*

On the left side of the spine.

93. *What is the office of the spleen?*

It is a ductless gland, and its office is not accurately known.

94. *What is fatigue?*

A waste of the particles of the system by exercise greater than the new materials supplied by the blood.

95. *What is rest?*

The restoration of the materials wasted by fatigue.

96. *What are the different temperaments of men?*

The nervous, the sanguine, the bilious and the lymphatic.

97. *Describe persons of nervous temperament.*

Those in whom the nervous system predominates, who are easily elated or depressed, whose mental actions are performed with rapidity.

98. *Describe persons of a sanguine temperament.*

Those in whom the circulatory system predominates; who are strong, but at the same time active; who are bold and resolute, and always hopeful.

99. *Describe persons with the bilious temperament.*

Those in whom the physical system predominates; who are strong in mind and body, but not quick; who are calm, steady and persevering.

100. *Who have the lymphatic temperament?*

Those in whom the lymphatic system predominates — who are indisposed to exertion and unexcitable.

101. *How does childhood differ from age?*

In childhood the blood flows rapidly, the muscles are easily stimulated to action, the nervous system is irritable, and the feelings and passions are readily quickened. In age, all the powers, feelings, and passions are in an opposite direction.

102. *Does this difference require a modification of diet?*

The elastic period requires a mild and soothing diet, while the inactive period needs more stimulating food.

103. *What two things ought to be considered in all kinds of food?*

Their digestibility, and the quantity of nutriment contained in them.

104. *What are the natural effects of stimulation?*

When any part of the body is rubbed with pepper, mustard, or spirits, it creates an irritation; the blood flows to the place more abundantly; there is greater action and quicker life; but these effects soon cease, and then the skin is pale, the circulation is more languid, for unusual action of the muscles causes fatigue.

105. *What is the effect of alcohol?*

It is quick in action, both in excitement and in exhaus-

tion. To a healthy stomach it must be injurious, for it gives merely temporary strength; it only quickens the action and expenditure of power already existing, leaving the stomach to fall below its natural standard.

106. *What becomes of the chyle?*

It is taken up by the lacteal absorbents, carried through the lacteal tubes to the thoracic duct, and thence emptied into the left subclavian vein near the heart.

107. *What constitutes the apparatus for the circulation of the blood?*

The heart, arteries, capillaries, and veins.

108. *Describe the heart.*

It is a hollow, muscular organ of conical form, placed between the lungs, lying more in the left then in the right cavity of the chest. It is about five inches in length, three inches and a half in breadth, and two inches and a half in thickness; and weighs from eight to twelve ounces. It is divided by a septum into two lateral halves; and a transverse constriction divides each half into two cavities, the upper cavity on each side being called the auricle, and the lower the ventricle.

109. *What is the beating of the heart?*

When the heart contracts, to send the blood out, the apex is thrown forward and strikes against the ribs of the left side, near the breast bone, where the beating is very easily felt.

110. *How do the valves of the heart act?*

In the passage-ways of the heart valves are placed, which open to allow the blood to pass downward, but close to prevent its passing upward.

111. *How many sets of blood-vessels are there?*

Three: the arteries, the veins, and the capillaries.

112. *Describe the arteries.*

They are tubular vessels, which serve to convey the blood from both ventricles of the heart to every part of the body. They are composed of three coats; internal middle and external. The middle coat consists of muscular and elastic fibres principally, which make the larger arteries very elastic.

113. *Describe the action of the veins.*

The veins return the blood from the capillaries to the heart, communicating very freely with one another.

114. *Describe the capillaries.*

They are minute terminal branches of the arteries, and pervade nearly every tissue of the body in a vast net-work.

115. *What is the difference between the pulmonary and the systemic circulation?*

In the pulmonary circulation the blood is conveyed to the lungs to be purified, and then brought back to the heart; in the systemic circulation the blood is carried to every part of the system, and returned by the veins to the heart.

116. *Explain the circulation of the blood.*

By a contraction of the heart the blood is forced from the left ventricle through the aortic valves into the aorta, and through all the arteries of the body, to the upper and lower extremities and the internal organs. From these various points it enters the capillaries, where all the changes in the system are produced; and is then taken up by the veins, and returned as venous blood to the right auricle of the heart. From the right auricle it passes through a valvular constriction into the right ventricle; from the right ventricle it is forced through valves into the pulmonary arteries, which carry it to the lungs; and from the lungs it is returned to the heart through the pulmonary

veins, entering the left auricle of the heart, and passing to the left ventricle, the point of beginning.

117. *What is the aorta?*

The largest artery in the systemic circulation. It passes upward from the heart at first, describes a curve, and goes downward, passing through the diaphragm and along the spinal column. The curved part is called the arch of the aorta; between the arch and the diaphragm it is called the thoracic aorta, and below the diaphragm the abdominal aorta.

118. *Where are the carotids?*

Arteries carrying blood upward along the neck; the left carotid arises from the arch of the aorta; the right from the arteria innominata, a large vessel springing from the aorta.

119. *What do the subclavians do?*

They carry blood to the arms.

120. *Where are the subclavians?*

The left subclavian arises from the arch of the aorta; the right from the arteria nominata.

121. *What arteries supply the stomach with blood?*

The gastric artery, arising from the cœliac, which arises from the abdominal aorta; also a branch from the splenic artery, and one from the hepatic.

122. *How is the liver supplied?*

The liver is supplied by the hepatic artery, a branch of the cœliac axis.

123. *How are the kidneys supplied?*

By the renal arteries.

124. *How is the spleen supplied?*

By the splenic artery, the third branch of the cœliac axis.

125. *How is the intestinal canal supplied?*

By the superior and inferior messenteric arteries.

126. *How is the heart supplied?*

By the coronary arteries, small branches from the aorta.

127. *What are the chief divisions of the aorta?*

The subclavian, carotid, cœliac, hepatic, renal and splenic, here the aorta branches off to go to the extremities, the two branches which pass through the groins are called the inguinal arteries, and where they enter the thighs, the femoral arteries.

128. *What is the vena cava?*

There are two vessels by this name, one called the superior and the other the inferior vena cava. The superior vena cava is formed by the junction of the two innominate veins, which in turn are formed from the subclavian and jugular veins. The inferior vena cava is formed from the junction of the two iliac veins, which are supplied by the femoral and other veins. Both vessels empty into the right auricle of the heart.

129. *What are the names of the larger branches of the vena cava?*

The jugular, subclavian, and inguinal veins.

130. *How are the arteries or veins arranged in respect to each other?*

The arteries begin at the heart, and end in all the parts of the body, in minute tubes. The veins, on the contrary, begin in the flesh of all parts of the body at the connecting link (the capillaries), and end in one large trunk, the vena cava, at the heart.

131. *How does the blood pass through the heart?*

By the contraction of the heart, which forces the blood from one chamber to another: first, from the right auricle

to the right ventricle, then to the lungs, and then back to the heart, passing through the left auricle and left ventricle.

132. *How do the pulmonary arteries and pulmonary veins differ?*

The pulmonary arteries convey venous blood from the heart to the lungs, where it is purified, and then returned to the heart by the pulmonary veins as arterial blood.

133. *Where are the largest arteries situated?*

Deep in the flesh, where they are protected from injury. Some of them approach the surface, and their pulsation can be felt at the wrist, at the sides of the neck and on the temple.

134. *Where are the largest veins situated?*

Their great trunks are placed near the great arteries, but, being less liable to injury, their branches are situated nearer to, and more of them on, the surface, than the arterial branches.

135. *What prevents the blood in the veins from flowing backward?*

Valves placed at proper intervals on the inner coat of the veins. The long veins are the best supplied, and some veins have no valves.

136. *How does venous blood differ from arterial?*

Venous blood is of a dark purple color, loaded with the waste particles of the system. The arterial blood is of a bright scarlet color, purified of all waste matter, rich in oxygen and nutritious elements.

137. *What action have the lungs upon the blood?*

The venous blood is purified by means of the air in the lungs, which gives up its oxygen, and absorbs the carbon and other impurities.

138. *What causes the blood to circulate in the veins?*

The action of the heart, which is like a pump. When the arterial blood is forced out, it leaves a vacuum for the venous blood to flow in. The pressure of the muscles on the veins by contraction has a share in it, also, and perhaps a power from behind, or capillary force, in the capillaries.

139. *How much blood is there in a man of average size?*

It is estimated to be twenty-eight pounds.

140. *In what time does it circulate through the system?*

The left ventricle of the heart, in a man of average size, will contain about two ounces. Every time the heart beats this cavity is filled and emptied. In ordinary health the heart will beat about seventy-two times a minute; therefore, in three minutes, an amount of blood equal to the whole will pass through the heart or the system.

141. *What circumstances will affect the rate of circulation?*

The heart will beat faster when we are standing than when we are sitting, and faster when sitting than when lying down. The pulsation is more rapid in the morning than in the evening. All exercise increases the force of circulation.

142. *How do mental states affect the circulation?*

When the mind is excited with anger, hope, merriment or love, the blood flows more freely, and a person is capable of greater exertions. The depressing passions have the opposite effect.

143. *Where is the living flesh made?*

In the capillaries.

144. *What materials of the body are obtained from the blood?*

All the tissues—the bone, muscle, brain, skin, fat, hair and nails, the tears, the saliva, and the perspiration.

145. *For what purpose is the circulation of the blood?*

To carry nutrition to the body and absorb the dead particles of the flesh.

146. *What do the elements of the blood contain?*

The elements of animal blood contain red and white corpuscles; animal fibrine; water; albumen. The first two form the clot, the remaining two the serum. The blood contains dissolved within it three gases: carbonic acid, oxygen, and a small quantity of nitrogen.

147. *Give the use of the corpuscles of the blood.*

The red corpuscles are supposed to convey oxygen from the lungs to the tissues, while the white are the agents which repair the body. This is shown in the healing of a large wound, as the white are then most abundant.

148. *What law must be observed in regard to eating if health is preserved?*

When exercise is light, eat but little, and at no time eat to excess.

149. *How are the wasted particles of the body disposed of?*

They are thrown out of the system by the lungs, skin, kidneys, liver and intestines.

150. *What elements are selected by the nutritive organs to form fat?*

Seventy-nine parts of carbon, 11½ parts of hydrogen, and 9½ parts of oxygen.

151. *What elements are required to form hair?*

Fifty parts of carbon, 6 of hydrogen, 17 of nitrogen, and 26 of oxygen and sulphur.

152. *What to form muscle?*

Fifty-one parts of carbon, 7 of hydrogen, 15 of nitrogen, 21 of oxygen, and 4 of other matters.

153. *Describe the lungs.*

The lungs are placed, one in each of the lateral cavities of the chest, separated from each other by the heart; they are conical in shape. The right lung is larger than the other, and has three lobes; the left lung has two. The weight of both lungs is about forty-two ounces; the color, in young persons, is a pinkish white, but it becomes mottled with dark spots as age advances. The substance of the lungs is of light, spongy texture. Passing through it in every direction from the trachea are a great number of bronchial tubes, which grow smaller as they subdivide. Each tube ends in a minute vesicle or air-cell.

154. *Describe the air-cells.*

The air tubes begin at the back part of the mouth and nostrils with a single cylinder, which leads through the neck to the chest; but in the lungs they are divided and subdivided into smaller and smaller tubes, and at the minute termination of these tubes are found the air-cells. These cells are separated from the myriads of minute arteries only by a membrane, so thin that gases can pass through it, and the blood itself is almost in contact with the air, thus becoming purified and in condition to nourish the system.

155. *How is voice produced?*

The larynx is the organ of voice, and is the upper part of the trachea, where small cords, called vocal cords, stretch across it. Voice is produced by the air rushing over the vocal cords.

156. *Compare the lungs and heart, giving three points in common and three points of difference.*

The three points in common are: both operate by expansion and contraction; both are involuntary organs — that is, on ordinary occasions they act independently of the will; both are indispensable to the maintenance of life. The

three points of difference are: the lungs contain air, the heart blood; the lungs contain air-cells, the heart is divided into compartments; the lungs purify the blood, the heart propels it through the body.

157. *Describe the spine.*

The spinal column is composed of twenty-four vertebræ, the sacrum and the coccyx, and is a little more than two feet in length. The vertebræ are separated from one another by a thick piece of elastic cartilage, which saves the body from jars. Twelve of the vertebræ in the thoracic region support the twelve ribs on each side.

158. *Describe a vertebra.*

It is somewhat circular and flattened on the sides with tooth-like projections which match one with another. Each vertebra has a spinous process extending backward. Through the centre of each vertebra the spinal cord passes.

159. *How are the bones of the spinal column divided?*

Into seven cervical or neck bones; twelve dorsal or back bones; and five lumbar or loin bones.

160. *What is the pelvis?*

It is a bony cavity at the lower part of the spine, composed of the sacrum, the coccyx, and the two innominates or hip-bones.

161. *What is the sternum?*

A flat, sword-shaped bone, consisting of three pieces, which forms the front part of the thorax, and supports the ribs by means of its cartilages.

162. *What is the coccyx?*

A small bone at the lower extremity of the sacrum.

163. *Describe the ribs.*

The ribs are curved, and join the spine behind and the sternum in front. The lower five are called false ribs,

because their connection with the sternum is not so close as that of the others.

164. *What bones compose the skull?*

The skull consists of the cranium and the face; the cranium is composed of eight bones, the face of fourteen.

165. *What are the bones of the arm and forearm?*

The humerus is the bone of the arm, and the radius and ulna are the bones of the forearm.

166. *What are the bones of the wrist?*

Eight small bones, arranged in two layers.

167. *What are the bones of the hands?*

Five metacarpal bones and fourteen phalanges.

168. *Name the bones of the lower extremities.*

In the thigh, the femur; in the leg, the tibia and fibula; in the ankle, seven small bones; in the foot, five metacarpal bones and fourteen phalanges; at the knee, the patella or knee-pan.

169. *How many kinds of joints are there?*

Four: the hinge joint, as in the elbow; the ball and socket joint, as in the shoulder and thigh; a combination of the hinge joint with a rotary movement, as in the neck; and a joint with a sliding movement, as between the clavicle and sternum.

170. *How are the joints held together?*

By ligaments.

171. *What is the clavicle?*

It is the collar bone, extending between the sternum and shoulders.

172. *Where is the scapula?*

The scapula, or shoulder-blade, is a broad, flat, triangular bone which forms part of the shoulder joint.

173. *What peculiarity is there about the neck-joints?*

Between the head and the first vertebra is a hinge joint, and between the first and second vertebræ is a joint with a rotary movement, formed by a tooth-like projection from the second vertebra, which serves as an axis for the first to play upon. The two joints combined give the various movements to the head.

174. *How is the femur joined to the pelvis?*

By a ball and socket joint.

175. *What peculiarity is there about the elbow and wrist joints?*

A rotary movement is given to the hand by the rotation of the radius in a fibrous socket at the elbow, and a corresponding movement at the wrist between the ulna and the hand.

176. *Describe the hip joint.*

The femur, or thigh bone, has almost a globular head at its upper extremity, which is fitted into a very deep socket called the acetabulum, in the side bone of the pelvis.

177. *Describe the shoulder joint.*

The head of the bone of the upper arm is less than half a ball, and is fitted into a very shallow socket in the upper corner of the scapula or shoulder-blade.

178. *How many bones are in the human body?*

Two hundred and four, besides the patellæ, or knee-caps.

179. *What three uses have the bones?*

To protect the delicate organs; to serve as levers on which the muscles may act to produce motion; to preserve the shape of the body.

180. *Of what is a bone made?*

Of two-thirds earthy and one-third animal matter. The

earthy matter is principally carbonate and phosphate of lime.

181. *What is the structure of a bone?*

A dense, hard tissue, like ivory, forms the outside shell, and a porous or cancellated tissue is always found on the inside.

182. *What are the rickets?*

A disease caused by lack of mineral matter in the bones, which become soft and under the weight of the body are distorted.

183. *What is a felon?*

A felon is a swelling of the finger or thumb, generally of the last joint. It is caused by an accumulation of matter beneath the periosteum and next to the bone.

184. *What is the cause of bow-legs?*

Bowlegs in children are caused by their standing on their feet before the bones of the lower limbs are strong enough to bear their weight.

185. *What is a dislocation?*

The forcing of a joint from its socket. This is done by breaking or straining the tissues of the joint.

186. *Describe the three lever-actions of the body.*

The movements of the head; raising the body on tiptoe; lifting the hands from the elbow.

187. *In what state do bones exist at first?*

As cartilage.

188. *How are they converted into bone?*

By nature's deposit of phosphates and carbonate of lime.

189. *What is the strength of the human bone?*

When used as levers they are 22 times as strong as sandstone, 3½ times as strong as lead, or twice as strong as oak timber.

190. *Define ossification.*

The growth of bone from the cartilage.

191. *What is the only bone in the body completely hard at birth?*

The petrous, which contains the organs of hearing.

192. *What are the chief uses of cartilage?*

To give smooth surfaces to the joints, reducing friction and serving as a cushion in shocks; to fasten bones together without destroying freedom of movement, as it acts between vertebræ; to serve as a firm yet not unyielding framework, as in the larynx and trachea; and to adapt itself to all purposes where firmness, toughness, elasticity and strength are required.

193. *What is the membrane called which invests the bones?*

The periosteum. It is a firm, whitish-yellow in color, and encloses the vessels which convey nutriment into the bones. It is this membrane to which the ligaments and tendons are attached, as they cannot be fastened to the bone itself.

194. *Into how many groups are the bones of the body divided?*

For convenience of study, into four: the bones of the head, of the trunk, of the upper extremities and of the lower extremities.

195. *Where are the synovial membranes situated?*

In joints.

196. *What is the function of a synovial membrane?*

To secrete a liquid which lubricates the joint.

197. *When is a joint said to be sprained?*

When a ligament, or some fibres of a ligament are badly stretched or torn.

198. *What are the muscles?*

The active organs of locomotion. They are formed of bundles of reddish fibres endowed with the property of contractility.

199. *How many kinds of muscles are there?*

Two: those under control of the will, called the muscles of animal life; and those over which the will has no control, called muscles of organic life.

200. *What is the use of muscles?*

To produce all the motions of the body.

201. *How many muscles are there?*

About 527; the number varies.

202. *How are the muscles under the control of the will?*

Through the nervous system. Every muscle of animal life is supplied with nerves through which the mind exercises its influence.

203. *What is St. Vitus's dance?*

A disease of the voluntary muscles, causing spasmodic motions.

204. *What is lock-jaw?*

A disease in which there are spasms and a contraction of the muscles, usually beginning in the lower jaw. It is sometimes caused by a very trivial injury, as cutting the foot, running a fish-hook into the finger, a bruise or the like.

205. *Is the heart a muscle?*

It is a muscle of organic life.

206. *How do we breathe?*

Principally by means of the diaphragm, which by contracting produces a vacuum in the lungs, and air rushes in to fill the space.

207. *Describe the diaphragm.*

It is a flat muscle, a flexible partition which divides the chest from the abdomen and separates the respiratory from the digestive organs. Its edges are attached to the back-bone, to the lower edge of the lower ribs, to the breast-bone, and to the lower part of the chest. It forms an arch, upon the upper surface of which the lungs rest, while in the hollow below lie the liver and stomach. When the diaphragm is at rest its upper point reaches as high as the fourth rib; but when it is in action it is drawn down to below the seventh rib.

208. *Explain the process of inspiration.*

The muscles on the sides of the chest raise the ribs and extend their circle forward and outward; the diaphragm draws down its arch and thus enlarges the chest; and, the lungs having room for expansion, the air is pressed into them to fill the vacuum left by the enlarging chest.

209. *Explain the process of expiration.*

After the chest is thus sufficiently expanded, the muscles of the ribs and the diaphragm relax. The action of other muscles carries the ribs downward; at the same time, the muscles which cover the abdomen press upon its contents, and force them against the diaphragm; this yielding to the pressure, rises and presses upon the lungs, which retreat before it, and the air is expelled.

210. *What is the cause of squinting?*

Most cases of squinting are caused by long sightedness, the muscles being strained in the effort to obtain distinct vision.

211. *What is coughing?*

A spasmodic action of the muscles of expiration forcing the air out violently through the mouth.

212. *What is sneezing?*

It is the same action as coughing, only the mouth is closed, and the air rushes through the nose.

213. *What are sighing and snoring?*

Sighing is a prolonged inspiration, followed by an audible expiration. Snoring is caused by the air passing through both nose and mouth, the palate in the meantime producing a vibration of the air.

214. *What are laughing and sobbing?*

Laughing and sobbing are much alike as regards the action of the muscles. The sounds are produced by short, rapid contractions of the diaphragm.

215. *What are yawning and hiccoughing?*

Yawning, or gaping, is like sighing, only the mouth is open wide to take in the deep inspiration. Hiccoughing is caused by a contraction of the diaphragm and a constriction of the glottis.

216. *What is the effect of breathing the same air several times?*

It poisons the system, the expired air being loaded with waste matter and carbonic acid.

217. *In how many ways is the air unfit for respiration?*

Three: by being deprived of oxygen; by being loaded with carbonic acid; by being filled with waste matter from the lungs, skin, etc., or other poisonous materials.

218. *How much fresh air ought to be supplied to each person per minute?*

About four cubic feet.

219. *How much air will the lungs hold?*

About 384 cubic inches.

220. *What effect has an ill-ventilated school-room upon children?*

They grow dull and sleepy from the action of the poisonous matter in the air.

221. *How should we ventilate our bed-rooms and school-houses?*

The windows should be opened in such a manner as to admit fresh air without its blowing directly upon the sleeper or student. This is usually accomplished best by lowering the top sash and at the same time lowering the curtain, otherwise the obstruction would throw the current downward. Ventilation through the ceiling is advisable, and can easily be arranged at time of building.

222. *What is the average number of respirations per minute?*

Eighteen.

223. *What animals are most active and which are most sluggish?*

Those which breathe the most are the most vigorous, lively, and active, while those which breathe least are the most sluggish, stupid and feeble.

224 *How does consumption waste the flesh and strength?*

In this disease the lungs are more or less filled with tubercles and abscesses; the air-vessels are to some extent closed, so that the air cannot penetrate them and reach the blood to purify it; therefore, lacking pure blood, the system is not well nourished, the muscles grow thin and weak, and the body gradually wastes away.

225. *What are bronchitis, pleurisy and pneumonia?*

Bronchitis is an inflammation of the mucous membrane of the bronchial tubes. This inflammation causes a secretion of mucus, and consequent coughing. Pleurisy is an inflammation of the pleura. Pneumonia is an inflammation of the lungs, affecting chiefly the air-cells.

226. *How may a constitutional tendency to consumption be warded off in youth?*

By plenty of pure air, exercise, and a careful diet. Rich pastry, unripe fruit, salted meat and acid drinks should be avoided. A certain quantity of fat should be eaten at each meal.

227. *What is the rule for prevention and cure of a cold?*

Keep the blood upon the surface.

228. *What is the first step to be taken in the cure of a disease?*

To obey the laws of health which have been violated. Medicine is not taken to destroy a disease, but to hold it in check while nature repairs the injury, and again brings the system into harmonious movement.

229. *Why does sleep sometimes fail to refresh?*

For want of sufficient air.

230. *What is carbonic acid?*

A gas known by many as "damps" or "dead air;" it is often found in wells and vats. It is heavier than air, and, therefore, falls like water to the bottom of a vessel or room.

231. *What is a common source of danger from carbonic acid?*

A pan of coals is sometimes left burning in an ill-ventilated sleeping-room. The gas sinks, but as more is produced it keeps filling more and more space till it gets up to the sleeper's head, is inhaled, and suffocation is the result.

232. *How does drowning produce death?*

The water taken into the mouth, nose and ears prevents the access of air to the respiratory organs, and the sufferer dies of suffocation.

233. *What necessity is common to all animals?*

Good air, though in different degrees. Every animal, from the highest to the lowest, must sustain life by its breath.

234. *What reciprocal offices do animals and vegetables perform?*

The animal uses oxygen and gives out carbonic acid; while, on the other hand, the plant uses carbonic acid and gives out oxygen.

235. *What is the temperature of the human body?*

98° to 100° F.

236. *What is the origin of heat in living bodies?*

The union of the carbon of the food and the oxygen of the air. This produces heat in much the same way that heat is produced by sensible combustion.

237. *Into what classes are animals divided in relation to heat?*

Into the warm-blooded, including man, birds, quadrupeds, etc., whose heat is always of the same degree; and the cold-blooded, including snakes, oysters, fishes, worms, toads, turtles, etc., the heat of which is but little higher than that of the medium wherein they live.

238. *What prevents any considerable increase of temperature in the healthy body?*

Perspiration.

239. *What is insensible perspiration?*

The moisture which is absorbed by the air as fast as formed.

240. *What is sensible perspiration?*

The moisture which is exuded too fast to be immediately absorbed, and is left in small drops on the skin.

241. *Which best protects from cold, alchohol or food?*

Food. Alcohol stimulates the stomach and excites the nervous system. It supplies carbon and hydrogen to the flame; but these soon burn out, and the body is afterward cooler than it otherwise would have been. Food alone can sustain a permanent heat.

242. *Which warms most, flesh or bread?*

Flesh, since it contains more carbon and hydrogen.

243. *Why is more fat required for food in a cold climate than in a warm one?*

Because it supplies more carbon, and gives more heat.

244. *Of what use is fat to the body?*

It gives form to the body, and acts as a powerful non-conductor of heat. It collects around the joints and between the muscles and prevents irritation by friction.

245. *What is noticeable of fat?*

It does not accumulate within the cranium, the lungs, or the eye-lids.

246. *What are the oil glands?*

Clusters of tiny sacs, secreting an oil which flows along the ducts to the roots of the hair, and thence oozes out upon the cuticle.

247. *Describe the skin.*

It is composed of two layers — the derma, or true skin, and the epidermis, or cuticle. On the surface of the derma are the sensitive papillae, and within or beneath it are the sweat glands, hair-follicles and sebaceous glands. It is a dense and thick membrane, composed of firm and strong fibres, and is almost filled with minute blood-vessels.

248. *Name the three uses of the skin.*

The skin is used to protect, to exhale, and to absorb.

249. *What is the cuticle?*

The cuticle, or scarf-skin, is a thin layer for the purpose of protecting the derma.

250. *What part of the blood flows through the skin?*

A large proportion.

251. *Describe the hair.*

It is an outgrowth from the skin. It has a root which is bulbous, and a shaft which is hollow. The holiow ceases near the point.

252. *Describe the nails.*

They also are outgrowths from the skin. They are flattened, elastic structures of a horny nature, and are firmly connected with the cutis.

253. *Where is the seat of color in the skin?*

In the pigment cells, or the *rete mucosum*, which are situated in the innermost and last-formed layer of the cuticle. The contents of these cells give the different shades to the various races of mankind.

254. *What proportion of the waste of the body passes through the skin?*

About five-eighths.

255. *What connection exists between the internal organs and the skin?*

A most intimate connection. As the blood finds its way freely through it, it serves to relieve internal organs when the circulation is disturbed.

256. *What is the office of the skin?*

It protects the body, regulating its heat by means of the sweat follicles, and throwing out much waste matter.

257. *Name the organs which carry off waste matter from the body.*

The skin, lungs, kidneys, liver and intestines.

258. *Name the organs which bring fresh material to the body.*

The stomach and intestines particularly; sometimes the skin. The lungs bring oxygen.

259. *Describe the minute structure of the perspiratory organs.*

The perspired fluid is formed by the inner skin and conveyed to the surface through minute tubes which are attached to the glands. There are 3,528 of these little tubes on each square inch in the palm of the hand, and 2,800 on each square inch throughout the whole body, making seven millions of perspiratory tubes on a man of average size.

260. *Of what does the nervous system consist?*

The brain, spinal cord and nerves.

261. *Describe the general outline of the brain.*

It is divided into two principal parts, the cerebrum and cerebellum. The first is divided by a deep fissure into two lateral halves, called hemispheres. The under part of the cerebellum is divided in the same way. The cerebrum is much the larger part of the brain, and occupies the anterior part of the skull. Its surface is indented with many convolutions. The outer part, of a gray color, is called the cortical substance. The inner part, of a light color, is called the medullary substance. The cerebrum is separated from the cerebellum by a strong fibrous tissue.

262. *How is the brain protected?*

By three membranes which cover it. The inner and middle membranes are very delicate, and give the brain a soft cushion to lie between it and its bony enclosure. The outer membrane is thick and very strong, and would hold the brain in its position, even if the skull were removed.

263. *What peculiarity has the brain in regard to the sense of feeling?*

It has no feeling of its own, although capable of recognizing the sensations of all other parts of the body.

264. *Describe the sense of feeling.*

The nerves of sensation are spread over the whole body. Feeling is most delicate in the point of the tongue and the tips of the fingers. The surface of the skin is covered with minute conical projections called *papillae*. Each of these contains its tiny nerve, which receives the impression and conveys it to the brain, where perception is produced.

265. *Describe the sense of taste.*

The sense of taste is located in the papillae of the tongue or palate. The papillae start up when tasting, as you can see by placing a drop of vinegar on another person's tongue, or on your own before a mirror. These small, hair-like projections absorb the liquid to be tasted and convey it to the nerves.

266. *Describe the organ of smell.*

The nose, the seat of this sense, is composed of cartilage covered with muscles and skin, and connected with the skull by small bones. The nostrils open at the back into the pharynx, and are lined by a continuation of the mucous membrane of the throat. The olfactory nerves enter through a sieve-like, bony plate at the roof of the nose, and are distributed over the inner surface of the two olfactory chambers.

267. *What large nervous trunks have their origin in the brain?*

The olfactory, optic, facial, auditory, pneumogastric and other nerves, nine in all. Some authors divide the seventh and eighth pair, and make three more nerves.

268. *Where is the spinal cord?*

It extends from the brain through the whole length of the spinal column. It gives off thirty pairs of nerves, which divide and subdivide until they reach every part of the body.

269. *How many kinds of nerves are there?*

Two: motor and sensory.

270. *What three things are necessary for sensation?*

The nerves upon which the impression is made, the trunk which conveys the impression, and the brain which receives and perceives it.

271. *Is the action of the different organs modified by the nerves?*

Yes. The amount of blood they receive is regulated by the nerves.

272. *Do the arteries have nerves?*

They do.

273. *If the nerve which governs the action of the heart should be severed, what would the heart do?*

It would cease beating.

274. *When will motion be lost and feeling remain?*

When the motory nerve is severed.

275. *When will feeling be lost and motion remain?*

When the sensory nerve leading to any part is severed.

276. *What is reflex action?*

A sudden action occurring without thought or meditation, as we start at a sound, jump from sudden danger, or wink at a flash of light or threatened blow.

277. *What are day-dreams?*

Beautiful imaginings whence all disagreeable things are

excluded; delightful reveries, more commonly known as "building air-castles."

278. *Describe the eye.*

It is the organ of sight, set in a deep, bony socket, containing two humors — the aqueous, a transparent fluid in the anterior part, and the vitreous, transparent and jelly-like, situated in the posterior portion, and forming the greater part of the eye. Between these two humors is the crystalline lens, a double convex lens.

279. *What is the sclerotic coat?*

A dense, fibrous coat, covering the whole eye except in front, in which the cornea is placed, a transparent and strong tissue.

280. *What is the choroid coat?*

The middle coat, containing a black pigment which absorbs such rays of light as are not needed for vision.

281. *Where is the retina?*

A delicate nervous membrane, lining the inner surface of the choroid coat. The images of external objects are received upon it. Behind, it is continuous with the optic nerve.

282. *What is the iris?*

It is a thin, circular-shaped curtain suspended behind the cornea, in the aqueous humor, and connected at its circumference with the choroid coat. A small opening in its centre, which admits the rays of light, is called the pupil.

283. *Describe the lids.*

They are composed of cartilages adapted to the shape of the eye, the skin without, and the lining membrane within. One circular muscle surrounds the open part of the eye, and closes the lids when it contracts. Another muscle, attached to the upper eyelid by one end, and to the bone of the socket by the other, opens the eye.

284. *Where is the fluid prepared which moistens the eyes?*

In the lining membrane of the lids.

285. *What are the lachrymal glands and the nasal duct?*

The lachrymal glands secrete the tears, and are in the upper and outer part of the orbit. The tears clean the eye of any particles of foreign matter, and, upon reaching the inner corner of the eye, pass through the lachrymal canal and nasal duct into the nose. The nasal duct is a membranous canal, about three-quarters of an inch in length, extending from the inner corner of the eye into the nose.

286. *What moves the eye?*

The eye is rolled by a set of muscles peculiar to itself. They are attached by one end to the bony socket, and by the other to the eyeball. By their contractions they roll the eye in every direction; and by their coöperation both eyes are directed to a single object.

287. *Describe the optic nerve.*

It passes from the base of the brain forward through the socket and into the eyeball. After passing the outer and middle coats, it is spread upon their inner surface and forms the retina, which receives the rays of light.

288. *How is vision produced?*

The light is reflected from objects, and passes through the transparent cornea and the pupil into the ball. The humors and the lens refract it, and give the rays such a direction that they fall upon the retina, where they form the image of the object. This impression is carried along the optic nerve to the brain, and there perception occurs and the object is seen.

289. *What care should be taken in regard to the direction of the light when one is at work?*

Care should be taken that the light should not fall so that

it is reflected directly into our face; if possible it should come from behind.

290. *How does the eye change as one grows old?*

The lens loses its convexity in some degree, and the rays of light are not concentrated at short distances upon the retina; the person becomes far-sighted.

291. *What is the difference between a short-sighted man and one who is long-sighted?*

In one who is near-sighted the lenses are too convex; in one who is long-sighted the lenses are not convex enough.

292. *Why are some persons cross-eyed?*

Because the muscles which govern the movement of the eyeball do not act in harmony: one muscle is more powerful than another, and draws the eye to one side.

293. *What does the organ of hearing include?*

The external ear, the internal ear, and the passage between them.

294. *Describe the external ear.*

It is composed principally of stiff cartilage; and its shape is that which is best adapted to catch sounds and transmit them to the internal ear. The canal leading inward is about an inch in length, and is covered with hair and wax to protect it from insects. A thin membrane, the covering of the drum of the ear, is stretched across the canal, and separates it from the internal ear.

295. *Describe the internal ear.*

It consists of a cavity filled with air behind the membrane of the drum, and three small bones which reach from the membrane to the labyrinth, where the auditory nerve is spread out in many filaments to receive impressions of sound.

296. *What is the eustachian tube?*

A canal passing from the internal ear to the back part of the mouth, and serving as a vent to the air in the drum of the ear.

297. *How is sound produced?*

The pulsations of air pass along the external canal and cause the membrane of the drum to vibrate, which transmits the vibrations by the air and three small bones to the labyrinth, where, in some unexplained manner, the filaments of the auditory nerve receive the impression; this is conveyed to the brain, and we hear.

QUESTIONS AND ANSWERS

ON

PARTICIPLES AND INFINITIVES

1. *What construction have infinitives and participles?*

All infinitives and participles have the construction and use of the noun, the adjective, or the adverb.

2. *When has an infinitive the construction of a noun?*

When used as subject of a verb, or in apposition with a noun; as a noun in the absolute case; as the object of a verb or preposition.

3. *Illustrate by example.*

To play is natural. *To do* good is conducive to happiness. *To lie;* oh, how base! They love *to laugh.* What went ye out for *to see?*

4. *When has the infinitive the construction of an adjective?*

When used to limit or modify the meaning of a noun.

5. *Give examples.*

A desire *to play* is natural. He gave orders *to march.* This rule is *to be observed* — adjective in the predicate. This *to-be-observed* rule is, or exists.

6. *When has the infinitive the construction of an adverb?*

When used to limit the meaning of a verb, adjective, adverb, or other infinitive.

7. *Give examples.*

They came *to see*; i. e., for the purpose of seeing. They were anxious *to go*. That horse is strong enough *to draw* any load. I wish to go to town *to trade* to-day.

8. *Have infinitives case?*

They have not. Case belongs alone to nouns and pronouns.

9. *Has the infinitive always a subject?*

It has, but not always expressed.

10. *What is the subject of* "to go," *in* "I wished to go home"?

The subject of "to go" is "I," understood; the meaning evidently is, I wished *that I might* go home.

11. *In what case is the subject of the infinitive?*

In the objective case, except when its subject is, or refers to, the same person or thing as the subject of the finite verb, or when the subject is any word but a noun or pronoun.

12. *Has the participle always a subject?*

It has, either expressed or implied.

13. *In what case is the subject the participle?*

Usually in the possessive case; sometimes in the objective; as: There is no harm in children's playing by the river (subj. poss.). There is no harm in children playing by the river (subj. obj.).*

14. *What is the rule for the construction of participles?*

They are to be used in all cases like the infinitive.

15. *In the sentence, "To be honest with you, I was in error," parse* "to be."

To be: verb; irreg., intrans., act., pres., infin., with the

* This is much disputed, many claiming that the possessive pronoun "their," understood, is the subject of "playing," in the second sentence.

construction of an adverb limiting the verb *confess*, understood — [I confess] (in order) to be honest, etc.

16. *In what manner do we determine whether the infinitive has the construction of a noun, an adjective, or an adverb?*

First, and mainly, by the sense or meaning; when the infinitive has the construction of an abverb, the words "in order" can be placed immediately before the infinitive without destroying the sense; as: They came [in order] to see. When it has the construction of an adjective it can be changed to its present participle, placed immediately before the word it limits, and make good sense; as: He asked for money *to spend*, i. e., spending-money. I want a place *to study*. i. e., studying-place.

17. *How do we determine what is the subject of the infinitive, when that is not apparent, as in "He was eager to depart"?*

Change the infinitive to its equivalent subordinate clause, and the subject will appear. He was eager *to depart*, i. e., *that he might depart*. *He* is the subject. Be so good as *to go*, i. e., that *you* should go. John was told not *to go*, i. e., that *John* should not go.

18. *In the sentence, "To die is gain," what is the subject of* "to die"?

Person, understood. Expanded, That any person should die is gain.

QUESTIONS AND ANSWERS

ON

WRITING.

1. *Define writing.*

The art of expressing thought in legible characters; in the broadest sense, the use of a form for the conveyance of meaning.

2. *What are the principal subjects to which attention should be given in teaching or learning the art of writing?*

Position; manner of holding pen; movement; form; rate; spacing and shading.

3. *How many positions are commendable, and what are they?*

Four: the "left," the "front," the "right-oblique" and the "right."

4. *Describe the "left" position.*

One sits or stands with the left side inclined toward the desk, the left arm lying on the book or paper, the weight of the body supported mainly by the left side and right arm, the book or paper at right angles to the desk.

5. *Under what circumstances is the left position generally used, and with advantage?*

When writing in large books, or when it is impossible or inconvenient to turn the paper obliquely.

6. *Describe the "front" position.*

One sits or stands directly facing the desk, near it, but not leaning over it; the forearms both on the desk and nearly at right angles to each other, the left holding in place the book or paper, which should be inclined so that the lines meet the right forearm at right angles.

7. *What particular advantage has the front position?*

The weight of the body is not thrown to either side; hence this position is best adapted to resist fatigue of the bodily muscles.

8. *Describe the "right-oblique" position.*

One sits or stands with the right side inclined toward the desk, the right forearm resting wholly on the desk, the left partly so and the copy placed obliquely on the desk. The weight of the head and shoulders is thrown on the left side.

9. *Describe the "right" position.*

One sits or stands with the right side turned to the desk but not in contact with it, the right forearm as well as the copy being on the desk parallel with its edge, and the copy held in place by the fingers of the left hand.

10. *What special caution should be kept in view in each and all of the before-mentioned positions?*

To keep the body erect and by no means to permit the head to drop forward over the paper.

11. *Describe the manner of holding the pen.*

The manner most common among business men and taught in most of our commercial colleges, is that recommended by Mr. Spencer: holding the pen between the first two fingers and thumb, the holder crossing the forefinger in front of the knuckle-joint and the second finger at the root of the nail; the end of the thumb touching the holder opposite the lower joint of the first finger;

the other fingers separate from the first two at the middle joint and curved so that the ends of the nails rest upon the paper.

12. *What is meant by movement?*

The proper motion of the muscles of the shoulder, arm and hand in writing.

13. *How many kinds of movement are usually employed in writing?*

Two: the combined and the whole-arm.

14. *Describe each.*

The combined movement is the motion of the muscles of the forearm and fingers together, resting upon the elbow and the nails of the third and fourth fingers; this is used in ordinary writing. The whole-arm movement is a motion of the muscles of the whole arm and shoulder, resting upon the nails of the third and fourth fingers and upon the point of the pen; this is used in making large capitals and flourishes, and in blackboard exercise. The wrist joint should in all cases be kept free.

15. *What is meant by* form?

The exact shape and appearance of a character, representing a thought preconceived in the mind.

16. *In what manner does a careful study of* form *aid in making a good penman?*

The mind directs the action of the muscles, and, as writing is a result of muscular action, the mind must have a clear, concise and ready conception of what it wishes the muscles to do before the action can be realized.

17. *What is a line?*

The path left by a point moving in any direction.

18. *How many kinds of lines are used in writing?*

Two: straight and curved. A straight line is the path

of a point moving in but one direction; a curved line is the path of a point constantly changing its direction.

19. *How many kinds of curves are used in writing?*

Two: right and left. A right curve bends to the right of a straight line connecting its extremities, while a left curve bends to the left.

20. *Define horizontal, vertical and oblique lines.*

A horizontal line is one parallel to the horizon; a vertical line is one at right angles to the horizon; an oblique line is one which is neither horizontal nor vertical.

21. *When are lines parallel?*

When they are equi-distant from each other throughout their entire length.

22. *What is meant by the base line, the head line, and the top line?*

The line upon which the letter rests is the base line. The line, real or imaginary, which bounds the height of the small letters, or those but one space in height, is the head line. The line which bounds the height of the extended letters, or those three spaces in height, is the top line.

23. *What is an angle?*

The space between two lines meeting in a point.

24. *How many kinds are used in writing?*

Two: right and acute. A right angle is formed by one right line meeting another perpendicularly. An acute angle is one smaller than a right angle.

25. *What is a degree?*

A 360th part of the circumference of a circle.

26. *What is meant by a slant of 52° or of 30°?*

If from the centre of a circle a vertical and horizontal line be drawn to meet the circumference, and the smaller of

the two arcs thus made be divided into ninety equal parts or degrees, a line drawn from the centre of the circle to a point on this arc 52° from where the arc meets the horizontal line, is said to be on a slant of 52°. One drawn similarly from a point 30° above the horizontal is said to have a slant of 30°.

27. *What is meant by a main slant and a connecting slant?*

A main slant is a slant of 52°, so called because the main or downward strokes of written letters have this slant. A connecting slant is a slant of 30°, so called because it is generally used in upward or connecting strokes.

28. *In how many ways are the strokes of the pen united in forming letters?*

Three: by angular juncture, as in the upper part of the small *i;* by short curves, as at the base of the small *i;* and by oval turns, as in the large *O.*

29. *What are the units for measuring the height and width of letters?*

The height of the small *i*, commonly called a space, is the unit of height. The horizontal distance between the two straight lines in the letter *u* is the unit of width.

30. *What letters are but one space in height?*

a, c, e, i, m, n, o, u, v, w and *x.*

31. *What is the height of* r *and* s?

One and one-fourth spaces.

32. *A part of what other letter has a similar height?*

The final part, or small oval of the letter *k.*

33. *What is the height of* t, d *and* p?

Two spaces.

34. *How far do* p *and* q *extend below the line?*

One and one-half spaces.

35. *What letters extend two spaces below the line?*

j, g, f, y and *z*.

36. *What letters extend three spaces above the line?*

b, f, h, k, l, and all the capitals.

37. *What is meant by principles?*

Lines of a certain and established form, by combinations of which all letters may be formed.

38. *What is the object of the study and practise of principles, as such, when learning to write?*

1. To simplify the forms of letters. 2. To teach both mind and muscle this simplified form. 3. To give a standard for uniformity. 4. To educate the taste to more pleasing proportions in the parts of letters.

39. *In what other way may we assist the mind in obtaining a true idea or picture of the form of letters?*

By analysis.

40. *What is meant by the analysis of letters?*

To analyze a letter is to name the separate principles employed in its construction, and to state their position and manner of connection.

41. *Where should we begin and end in forming the small letters?*

We should begin on the base line always, and end one space above the base line.

42. *What capitals should begin three spaces above the base line?*

A, E, M, N, O.

43. *Which should begin on the base line?*

C, G, H, I, J, K, L, M, N, Q, S, U, V, W, X, Y, Z.

44. *Which are begun less than three spaces above the base line?*

B, F, P, R, T, which begin two and one-half spaces above the base line. D begins two spaces above.

45. *What is meant by spacing?*

Leaving a proper distance between letters, words or sentences.

46. *What distance should be allowed between letters in a word?*

One and one-fourth spaces.

47. *To what distance is the connecting line carried in writing letters with* a, d, g *or* q?

Two spaces from the last straight line of the connecting letter. Write the words, *name*, *cinque*, and notice the required distance from the bottom of the downward stroke of *n* to the connecting point of *a* and *q*.

48. *When an oval is joined to a straight line, as in* on, *from what point is the measurement taken?*

From the middle of the oval to the straight line of the following letter.

49. *When an oval is joined to an oval, as in* oo, *how is the measurement taken?*

From the middle of first oval to the left side of second oval.

50. *What distance is allowed between a capital and the first curve of the small letter following it, where the capital does not join with the small letter?*

One-fourth space, recrossing from the base of the capital letter.

51. *What distance is allowed between capitals used as initial letters?*

One space.

52. *What distance is allowed between words?*

Two spaces.

53. *What distance is allowed when the following word begins with a capital?*

The extreme left point of the capital should be one and one-half spaces from the last downward stroke of the preceding word.

54. *When one word ends with a right curve and the next begins with a left, or vice versa, what space is left?*

Between the straight lines, two and one-third spaces; between the curves, one and one-third spaces; between the final downward stroke of the first and the beginning of the curve for the next word, one and one-half spaces.

55. *What distance is allowed between sentences?*

Three spaces.

56. *What distance is allowed between figures?*

One-third of a space.

57. *What is meant by shading?*

A proper use of light and heavy strokes, the latter formed by a gently-increasing pressure upon the points of the pen, which is held and moved so that the pressure is constantly alike on both points, until the middle of the stroke to be shaded is reached, and the pressure then released as gently as it was increased until the stroke is complete.

58. *What letters should not ordinarily be shaded?*

All the letters only one space high except *a*, which should receive a slight shade on the first downward curve.

59. *Where should the shade occur in* t *and* d?

The heaviest shade should be at the top of the last downward stroke.

60. *How should* p *be shaded?*

The shade should begin at the base line and gradually be increased to the end of the downward stroke.

61. *How should* f *be shaded?*

Only on that part of the downward stroke which is below the line.

62. *Where should the shade occur in* b *and* l, h *and* k?

In *b* and *l*, on the lower half of the first downward stroke In *h* and *k*, on the last downward stroke only.

63. *When two or more letters requiring similar shading occur together, what rule should be observed?*

The last should receive but half as much shade as the first one.

64. *Which capital letters should be shaded on the first curve and which on the second?*

A, C, D, E, O, Q, on the first; H, Z, Q, U, V, W, Y, on the second.

65. *Which should receive shade on the capital stem?*

A, B, F, G, H, I, J, K, L, M, N, P, R, S, T.

66. *What letters receive shading below the base line?*

f and *p* only.

67. *What are figures?*

Characters to represent numbers.

68. *How are figures formed?*

The same as letters, from a combination of straight and curved lines according to set principles.

69. *What is the height of figures?*

One and one-half spaces, except the 6, which is two spaces in height.

70. *On what slant are figures written?*

A slant of 52°.

71. *How far do the figures 7 and 9 extend below the line?*

One and one-half spaces.

72. *What is the width of the figures?*

They are all one space in width, measured at the widest part, except the 1 and 0; the 0 is but one space in width.

73. *Where is the stroke begun forming the figures?*

At the upper extremity.

QUESTIONS AND ANSWERS

ON

TEST PROBLEMS.

1. *The sum of two numbers is 12, and their difference is equal to $\frac{1}{3}$ of the greater. What are the numbers?*

The half sum of two numbers plus the half difference equals the greater.

The half sum minus the half difference equals the less.

Let $2x =$ difference.

$6 + x =$ greater.

$6 - x =$ less.

$$2x = \frac{6 + x}{3}$$

Ans. Greater $7\frac{1}{2}$. Less $4\frac{1}{2}$.

2. *A farmer made a mixture of barley, oats and peas, using 2 bushels of barley as often as 5 of oats and 1 of peas; the whole number of bushels in the mixture was 32. How many bushels of each kind did he use?*

Let $x =$ No. bushels peas.

$2x =$ No. bushels barley.

$5x =$ No. bushels oats.

$8x = 32$. *Ans.* 4 bushels peas, 8 bushels barley, 20 bushels oats.

3. *A farm rents for 6 per cent. more this year than last. This year it rents for $1,060. What was the rent last year?*

Let $x =$ rent last year.

$$x + \frac{6x}{100} = 1060. \quad \textit{Ans.} \ \$1{,}000.$$

4. *A steamer whose regular speed is twelve miles per hour in still water, can make a trip up stream in 7 hours and down in 5 hours. At what rate does the river flow?*

Let x = rate of river.
Then $7\ (12 - x) = 5\ (12 + x)$. *Ans.* 2 hours.

5. *A can do a piece of work in 6 days, B in 4 days. In what time can they both do it, working together?*

Let x = time required by both.

Then $\frac{x}{6} + \frac{x}{4} = 1$. *Ans.* $2\frac{2}{5}$ days.

6. *What time is it when $\frac{1}{3}$ of the time past noon equals $\frac{1}{5}$ of the time to midnight?*

Let x = time past noon.
$12 - x$ = time to midnight.

Then $\frac{x}{3} = \frac{12 - x}{5}$. *Ans.* Half-past 4 o'clock P.M.

7. *What fraction is that which if 1 be added to the numerator the fraction will be $\frac{1}{3}$ but if 1 be added to the denominator the fraction will be $\frac{1}{4}$?*

Let x = numerator of fraction.
y = denominator.

Then $\frac{x+1}{y} = \frac{1}{3}$ and $\frac{x}{y+1} = \frac{1}{4}$. *Ans.* $\frac{4}{11}$.

8. *Divide the number* n *into two such parts that the greater, increased by* a, *shall equal the less, increased by* b.

Let x = greater; $n - x$ = less.
Then $x + a = (n - x) + b$.

Ans. Greater $\frac{n + b - a}{2}$ less $\frac{n + a - b}{2}$

9. *A says to B: "Give me one dollar and I shall have twice as much money as you." B says to A: "No; you*

give me one dollar and I shall have just as much money as you." How many dollars have each?

Let x = A's money; y = B's money.
Then $x + 1 = 2(y - 1)$ and $x - 1 = y + 1$.
Ans. A's = \$7. B's = \$5.

10. *What is the length of one edge of that cube which contains as many solid units as there are linear units in the diagonal through the opposite corners?*

Let x = length of edge.
$\sqrt{3x^2}$ = the diagonal.
$x^3 = \sqrt{3x^2}$. *Ans.* $\sqrt{3}$.

11. *The sum of two numbers is 100, and the difference of their square roots is 2. What are the numbers?*

Let x = greater; y = less
Then $x + y = 100$ and $\sqrt{x} - \sqrt{y} = 2$.
Square second equation and subtract. *Ans.* 64 and 36.

12. *What number is that consisting of two digits, units and tens, which is equal to three times the sum of its digits, and if 45 be added to the number, the order of the digits will be reversed?*

The local value of the digit in tens' place being ten times that in units' place, if we let x = units and y = tens the number will be $10y + x$. Then $10y + x = 3(x + y)$ and $10y + x + 45 = 10x + y$. *Ans.* 27.

13. *James is $\frac{1}{3}$ as old as John; 5 years ago he was $\frac{1}{5}$ as old; how old is each?*

Let x = James's age; y = John's age.
Then $x = \frac{y}{3}$ and $x - 5 = \frac{y - 5}{5}$ *Ans.* James 10, John 30.

14. *What two numbers are those whose product is 36, and the difference of their squares is 65?*

Let x = one number and y the other.

Then $xy = 36$ and $x^2 - y^2 = 65$.

Find value of x^2 in each equation and compare.

Ans. 9 and 4.

15. *Divide the number 2000 into two such parts that the greater shall be to the less as 9 to 7.*

Let x = greater number and y the less.

Then $x + y = 2000$ and $x : y :: 9 : 7$ or $9y = 7x$.

Multiply first equation through by 7 and subtract.

Ans. 1125 and 875.

16. *There is a fish whose head is 9 in. long; the tail is as long as the head and $\frac{1}{2}$ the body; and the body is as long as the head and tail together. What is the length of the fish?*

Let x = length of body and $9 + \frac{1}{2}x$ = length of tail.

Then $9 + 9 + \frac{1}{2}x = x$, or $x = 18 + \frac{1}{2}x$. *Ans.* 72 inches.

17. *A shepherd was met by a band of robbers who plundered him of $\frac{1}{4}$ of his flock and $\frac{1}{4}$ of a sheep over; he afterwards met a second band who took $\frac{1}{3}$ of the remainder and $\frac{1}{3}$ of a sheep over; and a third band took $\frac{1}{2}$ of the last remainder and $\frac{1}{2}$ of a sheep over, when he had but 25 sheep left. How many sheep had he at first?*

Let $12x$ = number he had at first.

$9x - \frac{1}{4}$ = first remainder.

$6x - \frac{1}{2}$ = second remainder.

$3x - \frac{3}{4}$ = third remainder.

$3x - \frac{3}{4} = 25$. *Ans.* 103.

18. *Simplify* $\dfrac{(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b})}{(\sqrt[4]{a} + \sqrt[4]{b})(\sqrt[4]{a} - \sqrt[4]{b})}$

In both numerator and denominator we have the product of the sum and difference of two quantities. *Ans.* $\sqrt{a} + \sqrt{b}$.

19. *A tree 80 feet high is broken during a storm; the upper part clinging to the stump strikes the ground 40 feet from the foot of the tree. How long is each part?*

Let x = upper part and $80 - x$ = lower part.
Then $x^2 - 42^2 = (80 - x)^2$. *Ans.* Upper part 50 feet. Lower 30 feet.

20. *A picture 12 feet by 18 feet is set in a frame of uniform width containing the same area as the picture. What is the width of frame?*

Let x = width of frame.
Then $24x + 36x + 4x^2 = 216$.
Transpose, unite and complete the square.

Ans. 3 inches.

21. *To find the area of a scalene triangle whose sides are a, b and c.*

From the vertical angle let fall a perpendicular to the base b.

Let x = the segment adjacent to the side c;
$b - x$ = the segment adjacent to the side a;
Then will $c^2 - x^2$ = perpendicular.
Also $a^2 - (b - x)^2$ = perpendicular.
Then will $c^2 - x^2 = a^2 - (b - x)^2$.

After finding the perpendicular multiply the base b, by $\frac{1}{2}$ the perpendicular.

22. *How are the above problems solved arithmetically?*

Add the three sides and divide this sum by 2. Subtract each side separately from the half sum. Multiply the several remainders and the half sum together and determine the square root of the result.

23. *How many strokes do the clocks of Venice, which go on to 24 o'clock, strike in a day?*

$s = \frac{n}{2}(a + b)$. $s = \frac{24}{2} \times (1 + 24)$. *Ans.* 300.

24. *A company of travelers at a hotel incurred a bill of $12. If there had been two more in the company each would have been charged 30 cents less. How many were there in the company?*

Let x = number in the company.

Then $\frac{1200}{x} - 30 = \frac{1200}{x+2}$.

Divide both members by 30. Clear of fractions and complete the square. *Ans.* 8.

25. *The sum of three numbers in arithmetical progression is 27, and the product of the extremes is 77. What are the numbers?*

The formulas will not apply in this problem so let y = common difference.

Then $x - y$ = first; x = second, and $x + y$ = third.

$3x = 27$, $x = 9$, $x^2 - y^2 = 77$. *Ans.* 7, 9, 11.

26. *A tract of land in the form of a square is surrounded by a board fence, four boards high, each board 16½ feet long; the number of acres in the tract equals the number of boards in the fence. How many acres of land are there?*

Let x = side of the square in rods.

Then $\frac{x^2}{160}$ = number of acres.

$16x$ = number of boards, each board being 16½ feet or 1 rod long. Then $\frac{x^2}{160} = 16x$.

After finding x, square it and divide by 260.

Ans. 40960.

27. *A boy being asked how many fish he had, replied: 11 fish are 7 fish more than ⅗ of the number. How many had he?*

Let x = the number.

Then $\frac{3}{5}x + 7 = 11$. *Ans.* 10.

28. *A man purchased a house with 10 doors, giving $1 for the first door, $2 for the second, $4 for the third, and so on. What did the house cost him?*

$l = ar^{n-1}$, $l = 1 \times 2^9$.

Substitute l in $s = \frac{rl - a}{r - 1}$. *Ans.* $1,023.

29. *A man holds an endowment policy payable in 30 years, and $\frac{1}{2}$ of the time past equals $\frac{1}{4}$ of the time to come. How much time has passed?*

Let x = time passed; $30 - x$ = time to come.

$\frac{x}{2} = \frac{30 - x}{4}$. *Ans.* 10 years.

30. *One kind of wine is 40 cents a quart, and another 24 cents. How much of each must be taken to make a quart worth 28 cents?*

Let x = the amount required at 40 cents
and y = the amount required at 24 cents.
Then $x + y = 1$ and $40x + 24y = 28$.

Ans. $\frac{1}{4}$ at 40 cents, and $\frac{3}{4}$ at 24 cents.

31. *A farmer has two flocks of sheep, each containing the same number. From one he sells 39 and from the other 93, and then finds just twice as many in one flock as in the other. How many did each flock originally contain?*

Let x = original number in each flock.
Then $x - 39 = 2(x - 93)$. *Ans.* 147.

32. *A man being asked his age, replied: If to my age you add its half, and third, and then deduct 10, the result is 100. What was his age?*

Let x = his age.

Then $x + \frac{x}{2} + \frac{x}{3} - 10 = 100$. *Ans.* 60 years old.

33. *A merchant has sugar at 9 cents and 13 cents a pound, and he wishes to make a mixture of 100 pounds that shall be worth 12 cents a pound. How many pounds of each quality must be taken?*

Let x = number of pounds at 9 cents.
and y = number of pounds at 13 cents.
Then $x + y = 100$, and $9x + 13y = 1{,}200$.
Ans. 25 lbs. at 9 c., and 75 lbs. at 13 c.

34. *A man was hired for a year for $100 and a suit of clothes; but at the end of eight months he left, and received his clothes and $60 in money. What was the value of the suit of clothes?*

Let x = value of clothes.
Then $\frac{100 + x}{12} = \frac{60 + x}{8}$. *Ans.* $20.

35. *Determine the 5th root of 31152784.1 by means of logarithms, knowing that the logarithm of 31152784.1 = 7.493497.*

$7.493497 \div 5 = 1.498699$, and by reference to the table of logarithms 1.498699 is the logarithm of 31.52.
Ans. 31.52.

36. *A man sold a horse for $420, thereby gaining 25 per cent. What was the cost of the horse?*

Let x = cost of horse.

Then $x + \frac{25x}{100} = 420$. *Ans.* $336.

37. *Two men commenced trade together. The first put in $40 more than the second; and the stock of the first was to the stock of the second as 5 to 4. What was the stock of each?*

Let x = what the first put in.
Then $x - 40$ = what second put in.
Then $x : x - 40 :: 5 : 4$. *Ans.* $200, and $160.

38. *A man traveled 36 miles in a certain number of hours; if he had traveled 1 mile more per hour he would have required 3 hours less to perform his journey. How many miles did he travel per hour?*

Let x = number of miles traveled per hour.

Then $\frac{36}{x} - 3 = \frac{36}{x+1}$. *Ans.* 3 miles.

39. *A person after spending $100 more than $\frac{1}{5}$ of his income, had remaining $35 more than $\frac{1}{2}$ of it. What was his income?*

Let x = his income.

Then $x = 100 + \frac{x}{5} + 35 + \frac{x}{2}$. *Ans.* 450.

40. *A boy engaged to carry 100 glass vessels to a certain place, and to receive 3 cents for every one he delivered, and to forfeit 9 cents for every one he broke. On settlement he received 240 cents. How many did he break?*

Let x = number he broke, and
$100 - x$ = number he delivered.
Then $3x - 9(100 - x) = 240$. *Ans.* 5.

41. *The shadow of a tree measures 42 feet; a staff 40 inches long casts a shadow 18 inches at the same time. What is the height of the tree?*

Let x = height of the tree.

Then $42 : \frac{18}{12} :: x : \frac{40}{12}$. *Ans.* 98$\frac{1}{3}$ feet.

42. *Divide $360 in the proportion of 2, 3 and 4.*

Let $2x$ = first; $3x$ = second and $4x$ = third.
Then $9x = 360$. *Ans.* $80, $120, $160.

43. *What is the length of the sides of a rectangular field whose length is three times its breadth and contains an area of 10,800 square rods.*

Let x = length, and $3x$ the breadth.

Then $3x^2 = 10{,}800$. *Ans.* Length 180, breadth 60.

44. *If 6 oranges and 7 lemons cost 33 cents and 12 oranges and 10 lemons cost 54 cents, what is the price of one of each?*

Let x = price of one orange, and y = price of a lemon.

Then $6x + 7y = 33$ and $12x + 10y = 54$.

Ans. Oranges 2 cents; lemons 3 cents.

45. *Divide the number 20 into two such parts that the product of their squares shall equal 9216.*

Let x = the greater and y = the less.

Then $x + y = 20$ and $x^2y^2 = 9216$.

Determine the square root of both members of the second equation and compare with the first. *Ans.* 12 and 8.

PROBLEMS OF PURSUIT.

46. *A sets out from a certain place and travels at the rate of 7 miles in 5 hours; and 8 hours afterwards B sets out from the same place, in pursuit, at the rate of 5 miles in 3 hours. How long before B will overtake A?*

Let x = number of hours before B will overtake A.

Then $\frac{5x}{3} - \frac{7x}{5} = 56$. *Ans.* 42 hours.

47. *The hour and minute hands of a clock are together at 12 o'clock. When are they next together?*

Let x = distance traveled by hour hand.

$12x$ = distance traveled by minute hand.

There being 12 spaces for the minute hand to gain on the hour hand, $12x - x = 12$. *Ans.* 1 hour, 5 min., $27\frac{3}{11}$ sec.

48. *At what time between 2 and 3 o'clock will the hour and minute hands of a clock be together?*

Let x = distance traveled by hour hand.

$12x$ = distance traveled by minute hand.

The minute hand must gain two revolutions on the hour hand.

Then $12x - x = 24$. *Ans.* 2 hours, 10 min., $54\frac{6}{11}$ sec.

49. *What time between 2 and 3 o'clock will the hour and minute hands be at right angles to each other?*

Let x = distance traveled by hour hand.

$12x$ = distance traveled by minute hand.

After the hands are together between 2 and 3 o'clock, the minute hand must gain three more spaces on the hour hand.

Then $12x - x = 27$. *Ans.* 2 hours, 27 min., $16\frac{4}{11}$ sec.

50. *At what time between 5 and 6 o'clock will the two hands of a clock be in the same straight line?*

Let x = distance traveled by hour hand.

$12x$ = distance traveled by minute hand.

Here five revolutions and six spaces must be gained.

Then $12x = x66$. *Ans.* 6 o'clock.

QUESTIONS AND ANSWERS

ON

PARLIAMENTARY RULES.

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1. *What are Parliamentary Rules?*

A code of regulations under which a body of persons may be assembled for deliberation, and governed while conducting this work.

2. *From what source did we derive these recognized rules?*

From the British Parliament.

3. *Why were they taken from the rules governing the British Parliament?*

They have been adopted in this country because of the early relationship between England and the United States. These rules have remained unchanged in the English Parliament for several hundred years, and have become a recognized source of authority among all English-speaking people.

4. *Are these rules binding upon all people in their assemblies?*

Not binding in the sense of rendering an assemblage liable to punishment for not following them; but universal custom, in course of time, comes to have substantially the force of law, and the general parliamentary rules are supposed to be followed as a matter of course except when legislative bodies specifically resolve otherwise.

5. *Are the rules often changed or ignored?*

Not in popular assemblies. In the legislative bodies of our Federal and State governments different systems of particular rules have been adopted, yet these are founded on and embrace all the essential rules of the common parliamentary law. Each legislature, therefore, provides itself with a legislative manual, which becomes the standard authority for the government of that body.

6. *When such a legislative manual is adopted by any particular legislature, does it become authority for the next legislature following it?*

It does not. Each legislature is free to adopt the rules of its predecessor or to create new ones.

7. *Would it be possible to establish a system of rules which would unify those of Congress and other legislative assemblies?*

It would not. Each body has certain local interests to consider or certain policies to promote, which require that it should make its own rules for self-government.

8. *Who is recognized as the most eminent single authority on parliamentary practice?*

Luther S. Cushing, author of *Cushing's Manual;* but his original work has been modified and changed by several annotators and editors.

9. *How is a popular assembly made into an organized body?*

Organization is effected by any person requesting the meeting to come to order, and suggesting that some one be nominated for presiding officer. Such nomination being made, he puts the question for a vote of the assembly. Should this nominee be rejected, other nominations are made, until a choice is effected, whereupon the officer elected takes the chair, and proceeds in the same manner to complete the organization of the assembly by helping it

to choose a secretary and such other officers as may be deemed necessary.

10. *Does this election of officers constitute the permanent organization of the assembly?*

Not necessarily, although in all meetings where people are called together for a special purpose, no further organization is customary, but should permanency be desired, these first officers are regarded as only temporary, to govern until a permanent organization is effected and other officers elected to take their places.

11. *How is the new organization usually taken up and acted upon?*

By selecting a committee on permanent organization, who report such articles for government as may have been suggested by the assembly or by individuals thereof, or derived from their own judgment. Such report is adopted or rejected, as the assembly may deem proper.

12. *Under such circumstances, is it usual to proceed in the election of permanent officers in the same manner as in the election of temporary ones?*

It is not. A committee is usually selected, who, after consultation, recommend the election of certain individuals as qualified to fill permanently the different offices required.

13. *By what name is the presiding officer recognized?*

In organized societies or legislative bodies as "president" or "speaker"; in political conventions, school meetings, or any ordinary popular assembly, as "chairman"; in a secret society, by whatever name may be the pleasure of that society.

14. *What name is applied to the recording officer?*

"Secretary" or "clerk."

15. *Who are entitled to participate in the proceedings of a meeting?*

When the assembly is in response to a call for the whole people, all are entitled to vote; in political conventions or caucuses, those who are recognized as electors or delegates of the party concerned; in school meetings, electors of the school district; in societies or associations, members in good standing.

16. *How are these electors, delegates or members recognized?*

Usually a committee is appointed to examine the credentials presented by the persons who claim a right to take part.

17. *What are credentials?*

Certificates of qualification. In Congress, certificates of membership are given by the executive authority of the State which each member assumes to represent; in the State legislatures, from county or parish officers; in political conventions, from state or local party authorities, according to circumstances.

18. *When are the credentials or certificates of membership examined and acted upon?*

The proper time for this investigation is after the temporary and before the permanent organization.

19. *When rival claims are presented, what is the procedure?*

The committee reports the claims, and all persons in interest are entitled to a hearing, the decision being left with those whose rights are not in controversy.

20. *Do the contesting members have the privileges of other members during the discussion of rights?*

They do not. After being heard, it is their duty to withdraw; or if, by the courtesy of the assembly, they are

permitted to remain, they have no further right to discuss or vote.

21. *Is it necessary that the president and clerk shall be members of the assembly?*

As these officers have merely to preside over and record the proceedings of an assembly, it is not necessary that they shall, in all cases, be members of the assembly. In legislative bodies, the clerk is seldom or never a member; and in the United States Senate and most State senates, the president is not a member.

22. *In most societies, what are the officers?*

President, vice-president, secretary and treasurer. To these may be added one or more vice-presidents, one or more secretaries, and such other officers or committees as the association desires.

23. *When an assembly has rightfully appropriated a room or place for its sessions, how can it protect itself from disorderly or improper conduct of any member or any person not entitled to be present?*

By employing sufficient force to remove such person or persons from the meeting.

24. *What authority has an assembly to employ such force?*

This protection is guaranteed by the Constitution of the United States, and all strictly necessary resorts to force are recognized as just.

25. *When a person becomes disorderly, is he subject to prosecution?*

Yes, according to the extent of his offense.

26. *How is the judgment, opinion, sense or will of a deliberative assembly expressed?*

According to the nature of the subject, by resolution order or vote. When it commands, it is an order;

opinions are expressed by resolution; questions are decided by vote.

27. *What object was in view when the various ways of disposing of a proposition or motion were adopted?*

As all questions are liable to be imperfect in form, objectionable in part, and not presented at the desired time, it was necessary that various ways should be invented by which the question could be retained, perfected, presented when desired, or postponed from time to time, at the will of the assembly.

28. *What is a quorum?*

A sufficient number of members for the transaction of business.

29. *What number constitutes a quorum?*

Usually, in councils, legislative bodies or associations, a rule is adopted determining this point; but in the absence of any other rule, a majority of all members is necessary to constitute a quorum.

30. *What is the duty of the presiding officer in regard to a quorum?*

He should not take the chair until he is satisfied that a quorum is present; if notice be taken, at any time in the course of the proceedings, that a quorum is not present, it becomes the duty of the presiding officer to ascertain by count the number present; should a quorum be lacking, the assembly must cease to transact business.

31. *Why is it necessary that a certain number should constitute a quorum?*

In order to secure fairness of proceeding, and to prevent hasty action, or action agreed to by so small a number of the members as not to command proper respect.

32. *What names are given to the codes of general rules, apart from mere procedure, by which organized assemblies are governed?*

Constitution and by-laws.

33. *How are changes made in the rules of any organization?*

By some method prescribed in the Constitution or by-laws; when there is no prescribed rule, it is proper for the assembly to act at any time upon an amendment the same as on any other question; for the suspension of a rule, however, there must be unanimous consent.

34. *When adopted rules are disregarded or infringed upon, whose duty is it to take notice thereof?*

Any member has the right to report such offense and require that the presiding officer enforce the rule without debate or delay.

35. *Suppose it is not the wish of the assembly that a particular rule be enforced?*

It matters not; so long as one member insists upon its execution, it must be done. It is then too late to alter, repeal or suspend the rule.

36. *How may any future enforcement of distasteful rules be avoided?*

By amending them at the proper time.

37. *If there is no specific provision for amendment or repeal of rules, when can changes be made?*

At any time when it is the will of the assembly to amend or repeal.

38. *May a rule be dispensed with or suspended where there is no express provision on this subject?*

It may not, except by general consent.

39. *What is meant by the term "general consent," as used in parliamentary practice?*

The unanimous opinion of the assembly.

40. *In taking a vote, does it always require a majority to pass the question?*

In all the common transactions of the people, a majority rules; but in legislative bodies, on some particular points such as the entering of the yeas and nays upon the record, one-fourth or one-fifth of the members present may carry the question, while other subjects may require a two-thirds vote, as in impeachment trials or the repassing of acts which have been vetoed.

41. *When an assembly is not likely to finish its business at one sitting, when would be the most appropriate time to arrange for reassembling?*

It would be more satisfactory in all cases to decide this matter before the time to close has arrived. The calm judgment of the assembly would be better expressed then, as impatience is often manifested when the motion to adjourn is made.

42. *In the election of officers, why is it necessary that absolute majorities should be required?*

As all officers of a deliberative assembly are removable at the pleasure of the assembly, it is not reasonable to suppose that persons elected by a minority could retain their offices when opposed by a majority. It is essential in the transaction of business that they should possess the confidence of the members, which they cannot be said to do unless they have the suffrages of at least a majority.

43. *What are the duties of a presiding officer?*

To open the assembly at the prescribed hour; to announce in its proper order the business to be transacted; to receive and submit all proper motions and propositions offered by

the members; to put to vote all regular questions presented for action, and to announce the results; to enforce order and decorum, and to restrain the members, when engaged in debate, from the violation of the rules of courtesy; to receive all communications, and announce them to the assembly; to sign his name to all acts, orders and proceedings of the assembly, when necessary; to decide all points of order or practice when called upon to do so; to name the members who are to serve on committees when no other provision has been made for their appointment; and, in general, to obey the commands of the assembly, declare its will, and stand as its representative.

44. *In the absence of the president and vice-president, whose duty is it to preside?*

It then becomes the duty of the secretary to open the meeting and conduct the proceedings until a president or chairman is chosen.

45. *Does the presiding officer thus chosen have the same power conferred upon him as the regular president?*

He does; the only difference being that he does not hold power beyond this particular session.

46. *What is an officer* pro tempore?

An officer appointed to fill, for the time being, the place of an absent one.

47. *In addressing an assembly, does the presiding officer rise?*

To state a motion, or put a question, he should rise, but he may read sitting.

48. *What is the duty of the recording officer?*

To take note of and record all the business transactions of the assembly; but he is not required to take minutes of words used in debate, or of things proposed or moved without coming to a vote. It is also his duty to read all

papers or communications; to call the roll of the assembly; to notify committees of their appointments and the business referred to them; to sign, if necessary, with the president, all acts or orders of the assembly; and to hold and protect all papers and documents, letting none be taken from the table without permission of the assembly.

49. *What position should the secretary or clerk assume while reading, or while calling the assembly?*

He should stand, unless disabilities prevent.

50. *What is meant by calling the assembly?*

Calling, by name, each member, whose duty is to respond by expressing his choice for or against the question before the assembly. This mode of obtaining the opinion of an assembly is often adopted in conventions where nominations for offices are made. It is quicker than a ballot.

51. *What are the rights and duties of members of any assembly?*

Every member is entitled to the same rights in the business transactions of the assembly; he is entitled to the respect of all other members while debating or recommending any proposition. It is the duty of every member to act the part of a gentleman in manners and language, and to avoid, as far as possible, any unnecessary noise and confusion.

52. *In cases of irregular or disorderly conduct, what should be done?*

It is the privilege of every member to report such conduct, and it is the especial duty of the presiding officer to take notice of and call the attention of the assembly to it, naming the guilty person. The latter is entitled to a hearing, if he wishes to explain his conduct. It is then his duty to withdraw from the assembly, unless permission be granted him to remain, but not to take further action, as no man is entitled to sit as his own judge.

53. *What punishment can be inflicted upon a member for willfully violating the rules of the assembly?*

Only such as relates to his rights in the assembly. He may be debarred from taking any action for a stated time; or he may be expelled, or subjected to any prohibition which the assembly desires.

54. *What misdemeanors are called high breaches of decorum?*

Assault by one member upon another, threats, challenges, affrays, etc.

55. *When a member desires to speak, whether in debate or for the introduction of business, how shall he proceed?*

He must rise in his place and address the presiding officer by his title; the presiding officer then calls the member by his name, which carries permission to proceed with his business.

56. *When two or more persons rise at the same time, or nearly so, to address the assembly, how shall the presiding officer decide who shall speak first?*

He should give the floor to the member whose voice he first heard.

57. *Should this decision be called in question, what must be done?*

The presiding officer must refer his decision to a vote of the assembly, and be guided thereby.

58. *What are communications?*

They are of two kinds: those which convey information of some general character, and those which contain a request for some action on the part of the assembly. The latter class embraces orders, resolutions or votes.

59. *What are motions or questions?*

Propositions drawn up by any member and introduced

for action in the assembly; but a motion must in all cases be sanctioned or seconded by another member.

60. *How is a petition prepared for presentation?*

A petition should contain a carefully constructed statement of what is desired, and be signed by the petitioner himself, except when sickness prevents or he is attending in person. In no case, however, should the petitioner present his own prayer to the assembly; it should be presented by some other member to whom it is entrusted.

61. *What is the duty of the member presenting a petition?*

He should first inform himself of the nature and substance of the petition. If, in his judgment, it contains nothing intentionally disrespectful to the assembly, he should rise in his place with the petition in his hand and inform the assembly that he has a certain petition, stating the substance of it. Then he, or some other member, should move that it be received. This motion being seconded, the question is put whether the assembly will receive the petition or not.

62. *What deviation is usually practised from this regular method of proceeding?*

The presiding officer usually, taking for granted that there are no objections to its reception, orders it sent up to the clerk, or secretary, and it is then read, by which means it is brought before the assembly to be disposed of as business; but should objections be made to this deviation, the presiding officer must require a motion of reception to be regularly made and seconded, or the subject must be dropped without further action.

63. *When petitions or other similar subjects are before the assembly for action, how are they usually disposed of?*

By being immediately considered or assigned to some

future time, or ordered to lie on the table for examination and consideration by the members individually.

64. *When any question is ordered to lie on the table, when does it again come before the assembly?*

Not until the members require it.

65. *Whenever a member introduces a proposition of his own for consideration by the assembly, how can he obtain the action of the assembly?*

He must put it into proper form and move that it be adopted; if it receives the second of any member, it comes before the assembly for action.

66. *As motions are usually made orally, what indulgence is extended to the mover by the presiding officer?*

It does not require that the motion be presented in writing. If otherwise presented, he is justified in refusing to receive it, except a motion for adjournment, or that a matter lie on the table, or some similar routine motions, always made in the same form.

67. *When a motion is made and receives no second, does it command further attention from the assembly?*

It does not, and no notice should be taken of it by the presiding officer. To this rule exceptions occur, such as where the presiding officer has to enforce decorum, or where it is necessary to proceed with some order of the assembly. Sometimes a special rule is passed requiring more than one second on particular subjects.

68. *When is a motion in the possession of the assembly?*

After it has been made and seconded, and stated by the presiding officer.

69. *After a motion has been stated by the presiding officer, can the mover withdraw it from the assembly?*

He cannot, except by special leave of the assembly, for it no longer belongs to him.

70. *When a motion has been made and seconded, but not yet stated by the presiding officer, can it be withdrawn or modified?*

The mover may withdraw or modify it, either of his own accord, or on the suggestion of some other member, or of the presiding officer, and without any motion or vote for the purpose.

71. *What is the duty of the presiding officer in regard to stating a motion when called upon to do so by any member?*

Whenever a member desires a motion stated for his information, it becomes the duty of the presiding officer to observe the request.

72. *While one motion is before the assembly, can another motion be made and acted upon?*

Not unless it is one which by its nature has priority of the question under consideration.

73. *Are members allowed to make remarks when there is no question before the house?*

When the remarks relate to some business not yet moved as a question, yes; but the presiding officer should be careful to check all observations which may tend to excite debate, it being a general rule that no debate can be allowed to take place on any question not actually pending.

74. *When a proposition is made, and the assembly is not willing to give it attention at that time, how is it disposed of?*

For this purpose resort is had to the previous question, indefinite postponement, postponement to some future time, or laying on the table; or, if the motion is not in a satisfactory form, reference to a committee.

75. *While a motion is under debate, what motion may be entertained?*

To adjourn; to lay on the table; for the previous question; to postpone to a day certain; to commit; to amend;

and to postpone indefinitely. These several motions have precedence in the order in which they are arranged here.

76. *By what name are these questions distinguished from the principal motion?*

They are called subsidiary questions.

77. *How would you define* subsidiary questions?

As questions which relate to the principal motion, and are used to enable the assembly to dispose of it in the most appropriate manner. These motions are sometimes used also to destroy the principal question, and even to dispose of one another.

78. *How are subsidiary questions classified?*

Under four heads.

First, if the question is considered useless or inexpedient, and the assembly desires to suppress it either for a time or altogether, the previous question and indefinite postponement are used.

Second, when more information is wanted, or time for examination and reflection, or the assembly has other matters more deserving of its present attention, motions to postpone to some future day or time, and to lay on the table, are used.

Third, when the form is defective, or more careful, deliberate consideration should be given the subject than can be conveniently by the assembly, a motion to refer to a committee is most proper.

Fourth, when alterations are desired, the motion to amend is used.

79. *What is the* previous question?

A motion intended to suppress debate and bring the question to a vote, or to remove it from before the assembly. Its form is: "Shall the main question now be put?" If the previous question is lost, the question under debate is

considered suppressed for the day; but if it is carried, then the question is put immediately, without further debate.

80. *What is the result of an* indefinite postponement?

To suppress a motion entirely. An indefinite postponement is equivalent to a dissolution.

81. *When should motions to postpone be made?*

When the members individually want more information than they possess, or where there is something else which they desire to dispose of first.

82. *If a subject is postponed, when may it be taken up again?*

Whenever it may suit the convenience of the assembly.

83. *What subsidiary motion is usually made when it is the desire of the assembly to postpone a question until the subject under consideration may suit their convenience better than when presented?*

To lay the question on the table. This question is not debatable.

84. *When a subject has been laid on the table, how may it be recalled?*

By a motion and vote, at any time when the assembly pleases; although, when any matter has been thus disposed of, it is generally understood that it will not again become a subject on the same day, unless such intention is so specified when the motion to table is made.

85. *In what form should a motion be made when it is desired to proceed with a matter which has been ordered to lie on the table?*

"I move that the assembly do now proceed to consider [here naming the matter or subject]."

86. *Suppose a question when ordered to lie on the table is never recalled, what becomes of it?*

It remains as dead. Hence the motion to table is often used to suppress a question under debate.

87. *What is a motion to commit?*

A motion to refer to a committee, or, if the subject has been in the hands of a committee, a motion that it be "referred back," or "recommitted."

88. *What authority has the committee thus appointed?*

It must follow the instructions of the assembly. If no particular instructions are given, then the committee must re-frame the matter, but it cannot change the subject.

89. *Can more than one committee be appointed to perfect any proposition?*

Different parts may be committed to different committees.

90. *What are motions to amend?*

To unite with the subject matter of a proposition some points or propositions not therein contained.

91. *What is the division of a question?*

When a proposition is composed of two or more parts, which are so far independent of each other as to admit of a division into several questions, and it is supposed that the assembly will approve of some of these parts but not all of them, a division may be made on a separate motion for that purpose.

92. *When a motion is thus divided, what becomes of it?*

It becomes a series of questions, to be considered and acted upon each by itself as an independent matter, in the order in which the mover has divided the proposition.

93. *Are these questions open to amendment?*

They are, the same as any other propositions.

94. *What must be the condition of a proposition to admit of a division?*

Its points must be so distinct and self-sufficient that if one or more of them be taken away the others will not be affected by the division.

95. *In legislative bodies, what is the mode of presenting and acting upon propositions known as* filling blanks?

They are presented in regular form, but blank in regard to time, number, or amount, which the mover desires to have filled by the assembly; they include such matters as the time of postponement, the number of which a committee shall consist, the amount of fine to be imposed, etc.

96. *In filling blanks in a motion, does it require separate action for each blank filled, and are such motions amendments?*

The blanks are to be filled by regular motions, which are not considered as amendments but as original motions, to be made and decided before the principal question.

97 *When several propositions are made for filling blanks which relate to time or number, which proposition must be taken up first?*

The greatest or farthest, and the assembly proceeds so on down to the least or nearest.

98. *When the propositions relate to limitation—as the amount of tax to be raised, the rate of interest, on what day the session of a legislature shall be closed by adjournment, or the like, which proposition must be taken up first?*

The least or nearest, and the assembly proceeds so on up to the greatest or most remote.

99. *When are the terms* addition, separation *and* transposition *used in legislative assemblies?*

They are used whenever a matter presented for action

contains more than one proposition, which might be better embraced in one; or when a proposition should be separated into parts; or when a paragraph or section requires to be transposed. But these modes of disposing of a proposition ought to be referred to a committee.

100. *After an amendment has been stated by the presiding officer, can the mover change it?*

He cannot; the same rule controls the amendment as the original question.

101. *When an amendment is proposed, and the mover of the original question signifies his consent to it, what digression is often practised?*

The amendment is incorporated with the original motion, and action taken on the whole at once.

102. *After a question or an amendment has been seconded, can the mover withdraw it?*

Only by general consent. Such motions, not coming to a vote, need not to be recorded.

103. *In how many ways may the form of a question be affected by amendments?*

In any one of three ways: by inserting or adding certain words; by striking out certain words; or by striking out certain words and inserting or adding others.

104. *As all forms of amendment are subject to certain general rules, how are these rules classified?*

As First, Second, Third, Fourth, Fifth.

105. *What are these?*

Rule First. — When a proposition consists of several sections, paragraphs or resolutions, the natural order of considering and amending it is to take up the paragraphs in the order in which they occur; and after a latter part has

been amended, it is not in order to alter or amend any former part.

Rule Second. — There can be no amendment of an amendment to an amendment. Whenever a proposed amendment to an amendment does not meet the requirements of the assembly, notice should be given by the one who desires to amend, that, if rejected, he shall move it again in the form in which he desires to have it adopted.

Rule Third. — Whenever a proposed amendment has been adopted or rejected by the assembly, the subject in question cannot afterward be altered or amended. In this rule, let it be observed that whenever an amendment has been voted upon by the assembly, it cannot again be amended; but before the proposed amendment has been brought to a vote, it is susceptible to change under Rule Second.

Rule Fourth. — Whatever amendment is disagreed to by the assembly cannot again become a question.

Rule Fifth. — When a proposed amendment is an infringement on one already adopted, this is fit ground for its rejection by the assembly, but not for its suppression by the presiding officer as out of order.

106. *In Rule Fifth, if the proposition is fit for rejection by the assembly, why may it not be suppressed by the presiding officer?*

The object is to guard against the possibility of the presiding officer's suppressing an important modification, which might embarrass instead of subserving the will of the assembly.

107. *When an amendment is made by striking out a particular paragraph or certain words, and the amendment is rejected, can it again be moved to strike out the same words or a part of them?*

The same words, or a part of them, if used with other

words and forming a different proposition, can be struck out the same as if no rejection had been made. The same rule is applicable to words which have been struck out and restored in connection with other words, providing the second proposition is substantially different from the first.

108. *When an amendment to an amendment has been moved, how shall the presiding officer proceed in stating the question?*

By putting the amendment to the amendment first; then the amendment; and, last, the original question as amended.

109. *In the third form of amending, by striking out and inserting, what is the mode of proceeding?*

As the form is a combination of the other two, it may be divided into these two forms by a vote of the assembly. If the motion is divided, the question first to be decided is on striking out; if this is carried, the question of inserting follows. Should the question for striking out be lost, then of course there can be no question for inserting. When the motion to strike out and insert is made as one question, and is lost, the same motion cannot be made again, but it may be moved to strike out the same words and insert nothing; to insert other words; to insert the same words with others; to insert a part of the same words with others; to strike out the same words with others, and insert the same; to strike out a part of the same words with others and insert the same; to strike out other words, and insert the same; and to insert the same words without striking out anything: provided, in all cases, that these new propositions are really different from the original motion.

110. *When a motion to strike out and insert is carried, what changes can be made?*

As the words struck out, or a part of them, cannot be inserted, or the words inserted, or a part of them, cannot be struck out, it becomes necessary, if changes are desired,

either to insert the words struck out, or a part of them, with other words; or to strike out the words inserted, or a part of them, with other words.

111. *What is the manner of stating a question which is required to be amended by striking out, or inserting, or striking out and inserting other words?*

The passage to be amended should first be read; then the words proposed to be struck out, or inserted, or struck out and inserted; and lastly, the whole passage as it will stand if the amendment is adopted.

112. *Can an amendment be made which will destroy the entire original motion?*

It can. Although the presumptive object of an amendment is for improvement, not destruction. If the assembly so wills, a bill may be amended by striking out all after the enacting clause and inserting a new bill wholly different in effect.

113. *In deliberative assemblies, what motion can be made to take the place of a regular question?*

Any one of a class known as privileged questions. These are of three kinds: first, motions to adjourn; second, those which relate to the rights and privileges of the assembly or of its members; and third, motions for the order of the day.

114. *Is a motion for adjournment always in order?*

Commonly. But there are exceptions to this rule. When the assembly is voting by ayes and noes, or a member is speaking, it is not in order.

115. *To entitle this motion to precedence over any before the assembly, how must it be given?*

Simply as a motion to adjourn, without the addition of any particular day or time.

116. *Can a motion to adjourn be amended?*

When it is the object of the motion to supersede a question already proposed, it does not admit of amendment; but if made when there is no other business before the assembly, it may be amended like other questions.

117. *When an assembly is adjourned without any particular day or time, when does it meet again?*

At the next regular day, as provided by a rule or by its own by-laws. But the adjournment, from time to time, of a meeting not organized for the transaction of business, is equivalent to a dissolution.

118. *When a question is interrupted by adjournment, and before any vote has been taken upon it, does it stand before the assembly at the next day of meeting?*

Ordinarily it must be brought forward again in the usual way; but if the question has been stated by the presiding officer, it stands before the assembly.

119. *To what are* questions of privilege *assumed to relate?*

To the rights and privileges of the assembly, or of its individual members, such as a disturbance of the assembly by members or strangers, or a quarrel between members. The settlement of such rights or privileges supersedes the question pending, and must be first disposed of. When settled, the question interrupted is to be resumed at the point where it was suspended.

120. *What are the* orders of the day?

When one or more subjects have been assigned for a particular day by an order of the assembly, they become the order of the day.

121. *When must the demand for the orders of the day be entertained?*

Whenever a proposition, except a motion to adjourn, or a question of privilege, is presented for the action of the

assembly, and does not relate to the orders of the day. In that case a motion to proceed with the business ordered will supersede the question before the assembly.

122. *When the demand for orders of the day is met affirmatively, how does the assembly proceed?*

The orders must then be read and gone through with in the order in which they stand. Should an order be assigned to a particular hour, a motion to proceed to it is not a privileged motion until that hour arrives; but if no hour is fixed, the orders are for the entire day and every part of it.

123. *What becomes of the original motion when interrupted by the orders of the day?*

It is removed from the assembly the same as an interruption by an adjournment. See No. 118.

124. *If the question is decided in the negative, what business can the assembly act upon?*

It can continue with the business which was before it when interrupted, and is entitled to dispose of this before the orders of the day can again be moved.

125. *If the business relating to the orders of the day is not disposed of on the day assigned, what becomes of it?*

It is no longer an order of the assembly; and, if acted upon afterwards, it must come up as any other business.

126. *What are* incidental questions?

Such as arise out of other questions, and are entitled to be decided before the questions which give rise to them.

127. *How are incidental questions divided?*

Into five classes: first, questions of order; second, motions for the reading of papers, etc.; third, motions for leave to withdraw a motion; fourth, motions to suspend a rule; and fifth, motions to amend an amendment.

128. *What is the duty of the presiding officer in relation to* questions of order?

To enforce the rules and orders without question, debate or delay.

129. *Can the presiding officer be questioned in regard to his decision of a breach of order or departure from rule?*

He can. Questions may arise in which there is no breach of order or violation of rules; and these must be decided before a case can arise for the enforcement of the rules.

130. *What is an* appeal *from the decision of the chair?*

Whenever the decision of the presiding officer is not satisfactory, any member may object to it, and have the question decided by the assembly. Such a question is debatable, and to be decided like any other.

131. *When an appeal is made, how does the presiding officer state it to the assembly?*

"Shall the decision of the chair stand as the decision of the assembly?"

132. *When an appeal is before the assembly, is the presiding officer entitled to express his own opinion?*

He is entitled to take part in the debate then, although on ordinary occasions he is prohibited from doing so.

133. *What is the rule in regard to reading papers?*

Where papers are laid before an assembly for its action, every member has a right to have them read once at the table before he is compelled to vote upon them. When, therefore, a member calls for a reading, no question should be raised; but if a member desires a repetition of the reading, or of some other paper, book or document on the table, or of his own speech prepared beforehand in writing, and objection is made, he must obtain leave of the assembly by motion and vote.

134. *Why must the consent of the assembly be obtained in such cases?*

Because of the delays and interruptions which would ensue if members were allowed to use the time of the assembly for such purposes.

135. *When, in the course of a debate or other proceeding, the reading of a paper is called for and objection is made, how must the assembly proceed?*

A new question, to decide whether the paper shall be read or not, can be made, which takes the place of the other, as incidental to it.

136. *When a motion has been regularly made, and the presiding officer has put the question formally to the assembly, can it be withdrawn?*

Only by unanimous vote of the assembly.

137. *What is the* suspension of a rule?

When a proposition is debarred from action of the assembly by some special rule, such rule may be removed for the time by a vote for the *suspension of the rule.*

138. *In the suspension of a rule, does a majority vote decide?*

In most legislative bodies it requires two-thirds or three-fourths, according to the code of rules adopted; but if no provision is made, the only mode of suspending or dispensing with a rule seems to be general consent.

139. *How is an amendment of an amendment to be treated?*

Like any other incidental question, the sub-amendment superseding the amendment until decided.

140. *Which of the subsidiary questions admit of no amendment?*

The previous question, and the motion to lay on the table.

141. *Why do these questions not admit of amendment?*

Parliamentary usage has fixed the form of the previous question, "Shall the main question now be put?" which calls for immediate action; consequently, no change can be made. The motion to lay on the table, usage has decided not susceptible to amendment, as it is already as simple as can be.

142. *When the* previous question *is moved, can another be made to prevent its action?*

The subsidiary motion to lay on the table will supersede it.

143. *If the previous question is decided negatively, is the main question then subject to amendment, commitment, or postponement?*

As the adverse vote has taken the main question out of the possession of the assembly for the day, nothing remains before it to amend, commit or postpone.

144. *How are questions of postponement classed?*

As indefinite, or to a day certain.

145. *Can such questions be amended?*

When the postponement is indefinite, it can be amended to a day certain; and when it is to a day certain, to some other day; or an amendment may be offered to this amendment, if still a different day is desired.

146. *When the amendment postponing to some other day is rejected, how can a change of day be obtained?*

The substituted day may be moved as an independent question.

147. *If the motion for postponement is decided in the negative, what other means can be resorted to for suppressing debate?*

The previous question; or motions to commit or to amend.

148. *If a motion for commitment is decided in the affirmative, can the previous question, or a motion for postponement, be used then?*

If the motion to commit is decided in the affirmative, the question is thereby removed from before the assembly, and consequently there is no ground for the previous question or postponement.

149. *How may a motion to commit, or recommit, be amended?*

By the substitution of one kind of a committee for another, or by changing the number of members of the committee.

150. *What motion supersedes all the other subsidiary questions?*

To lay on the table.

151. *Of the subsidiary questions, which can be superseded by others?*

The amendment question. This motion can be superseded by postponement to a day certain, or by a commitment.

152. *By what reasoning are the motions for postponement to a day certain and commitment allowed to supersede a proposed amendment?*

In either case the proposed amendment is not suppressed, but referred to a committee for careful deliberation. In case there was urgent business, a long debate might delay; hence the right to postpone to a day certain.

153. *How should business be brought before an assembly?*

In its regular order. In permanent organizations of an assembly or society, a settled order of business is usually adopted, and whatever business is to be transacted comes under that order; but in assemblies where no definite

system has been established, subjects are taken up when appropriately presented.

154. *When two or more subjects are to be considered, and no priority has been given to one over the other, which should command the attention of the assembly first?*

They are left to the discretion of the presiding officer, unless the assembly, by express action, decides to take up a particular subject.

155. *When any paper which consists of several distinct propositions is presented for the action of the assembly, what is the most appropriate manner of proceeding?*

The entire paper should first be read by the secretary or clerk, then by the presiding officer by paragraphs, pausing at the end of each distinct article for amendments if desired, and, when the whole paper has been thus scrutinized, the presiding officer puts the final question on agreeing to or adopting the whole paper as amended or unamended.

156. *Where a paper begins with a preamble or title, is it proper to proceed first with this?*

No. The preamble or title is postponed until the rest of the paper is disposed of.

157. *When a paper has been referred to a committee and is reported back to the assembly, how is it taken up for consideration?*

The amendments only are first read, in course, by the recording officer. The presiding officer then reads the first and puts it to vote, then the second, and so on until the whole is adopted or rejected, no amendments being made, except an amendment to an amendment, until all the amendments reported by the committee have been disposed of, when an opportunity is offered by the presiding officer to the assembly for amendments to the body of the paper; and when the whole has been thus acted upon, the

entire paper is put to vote on a question of agreeing to or adopting it as the resolution of the assembly.

158. *When the resolutions or articles have been thus agreed upon, how is the final question entered on the record of the assembly?*

As the order, resolution, etc., of the assembly, and not as the report of the committee accepted.

159. *When the paper referred to a committee is reported back in a new draft, which is often done when numerous changes are made, how is the new draft considered?*

As an amendment, and is to be first amended, if necessary, and then put to vote as an amendment reported by the committee; or, the new draft may first be accepted as a substitute for the original paper, and then treated as such.

160. *Give an example of how questions may grow out of each other?*

First, a proposition is moved. Then comes a motion to amend. This is followed by a motion to commit. The debate results in a question of order. Out of this flows a question of privilege and rights of members in debate. Finally, an attempt is made to dispose of the matter by a motion to lay on the table.

161. *In a case like this, we have six questions before the assembly at one time; how are they to be disposed?*

The regular course of proceeding requires the motion to lie on the table to be put first; if it is carried, the whole matter is removed from the assembly; if it is lost, the question of privilege must then be settled; then the question of order; then the question of commitment; if this is lost, the question of amendment is in order; and last of all, the main question.

162. *When is a proposition in order for any member to discuss it?*

After it has been moved and seconded, and stated to the assembly by the presiding officer. Until this is done, it is not before the assembly.

163. *What proceeding is sometimes allowed for the sake of speedily disposing of business?*

A member moves a principal question, and at the same time calls for the previous question, or that the resolution lie on the table.

164. *Under such circumstances, what may the presiding officer do to preserve the right of debate to the assembly?*

He may take no notice of the subsidiary question, but propose the principal one in the usual manner.

165. *When a member has obtained the floor, what right belongs to him?*

The right to express his opinion on the subject under consideration.

166. *Can he be interrupted in his speech by any other member, moving an adjournment, or demanding the orders of the day, or making any other privileged motion?*

He cannot parliamentarily — that is by right — be interrupted except by a call to order, and when this question is decided he is entitled to be heard through. When any matter of privilege affecting the assembly itself or any of its members, of which the assembly ought to have instant information — such as obstructing the passage-way to the hall, a quarrel between members, or a suggestion that it has become necessary to have lights — this affords sufficient cause for interruption until the assembly is again in condition to have the speaker proceed.

167. *When a member has the floor, and calls are made for an adjournment, or the orders of the day, or for the question, how are such calls to be considered?*

As breaches of order; for no motion can be made without members rising, addressing the chair, and being recognized by the presiding officer.

168. *How shall a member address himself to the presiding officer when he wishes to call attention to some point of order or privilege or to the orders of the assembly?*

"Mr. President, I rise to a point of order." He should then proceed with the statement of his point.

169. *When the time arrives for proceeding with the orders of the day, can a man be interrupted while speaking, and new subjects presented?*

He can; for if the debate or consideration of that subject were allowed to proceed, it might continue through the day and thus defeat the order.

170. *After a motion has been made, seconded and proposed, to whom is it customary to give the floor on opening the debate?*

To the mover of the question, in preference to others, if he rises to speak; also, on resuming debate after adjournment, it is customary to give the floor to the mover of the adjournment if he desires it.

171. *When two or more members claim the floor, to whom should the presiding officer give the preference?*

He should prefer the one who is opposed to the measure in question; but in all these cases the decision of the presiding officer may be overruled by the assembly.

172. *Has a member the right to discuss a subject before it is moved?*

If he states that he intends to conclude with a motion,

and informs the assembly what that motion is, he may be allowed to speak. But if he speaks upon a subject not known to be, or to be about to become, a motion before the house, he is liable to be called to order.

173. *Is the discussion of a subject, not already moved, indulged in by the members?*

Often, when the subject to be brought before the assembly is not definitely understood, the expression of opinion is free. This, at least, is allowed when no member raises an objection. If objection is made, the subject must come regularly before the meeting.

174. *When a member desires to address the assembly for the purpose of discussion, or to make a motion, how should he proceed?*

He should rise in his place, address the presiding officer as "Mr. Chairman," or "Mr. President," and if he is in order, the presiding officer will respond by calling the speaker by name. Thus the assembly receives notice who it is that speaks, and may give its attention accordingly.

175. *What is the duty of a speaker in regard to mentioning a member then present?*

To refer to him by some expression, or in some manner, without using his name, the object being to guard against the possibility of exciting personal feeling.

176. *When the presiding officer rises to speak, at the same time as another member, what shall be the duty of that member?*

To sit until the presiding officer has been heard.

177. *How long is a member permitted to speak on any subject?*

As long as he has the floor and keeps within the rules. See No. 184.

178. *What are the general rules in regard to speaking?*

No person is to use indecent language against the proceedings of the assembly, or to reflect on any of its prior determinations, unless he means to close his remarks with a motion to rescind such determination. No member is at liberty to digress from the matter of the question. Every member should clearly express his points of argument, or the presiding officer may mistake them for digressions. Care should be taken in discussion that the speakers follow the particular question instead of the general question; at one time it may be an amendment, at another a motion to postpone, and again a question on ordering the previous question.

179. *Does the introduction of a subsidiary motion restrain debate on the general question?*

Sometimes it happens that the subsidiary motion involves in itself the merits of the original proposition, in which case the debate embraces both.

180. *When a member is called to order for departing from the subject under consideration, what privilege may be extended to him?*

By an affirmative vote of the assembly he may continue, but in the absence of such express privilege he must abandon the objectionable course of his remarks and return to the subject under debate.

181. *How many times can a member speak on the same subject under debate?*

No member can speak, without permission of the assembly, more than once to the same question, but he may address upon the same subject as often as it is presented in the form of a different question; as when it is proposed to refer it to a committee, or when subsidiary or incidental questions arise in the course of the debate.

182. *On what points may a member speak a second time in the same debate?*

To clear a matter of fact, or explain some material part of his speech, but carefully keeping within that line, and not falling into the discussion of the matter itself.

183. *What is the meaning of the phrase "to clear a matter of fact"?*

To explain a statement made by a member, but which was not so put as to give the hearers a thorough comprehension of it.

184. *When a member wishes to make an explanation while another is speaking, and the speaker yields the floor for an explanation, has the speaker the right to the floor after the explanation has been given?*

He has not. In yielding the floor he relinquishes it altogether.

185. *What methods do assemblies adopt to prevent a continuation of long and unprofitable debates?*

Limiting the time allotted to each speaker; or adopting beforehand a special rule in reference to a particular subject, providing that debate shall end at a specified time and that all motions or questions pending in relation to it shall then be decided. Besides these methods resort is often had to the previous question.

186. *When an assembly refuses to support the presiding officer in his efforts to maintain order and decorum, what will he be justified in doing?*

In permitting every kind of disorder without censure.

187. *When disorderly words are used by one speaker, personally offensive or insulting to another, or to the assembly, how may his misconduct be checked?*

By a member or members rising and calling him to order,

the objecting party repeating the words used exactly as he conceives them to have been spoken, in order that they may be reduced to writing by the recording officer. If the presiding officer thinks there is no foundation for deciding the language disorderly, he will prudently delay giving orders to the clerk to record them, until a further expression of the assembly, either by vote or calling out, is obtained.

188. *If offensive words are not technically noticed at the time spoken, or immediately after the speaker has finished, has any member the right to censure the member before the assembly?*

Such censure, if offered, is not to be recorded, or any action taken thereon.

189. *Sometimes it occurs that a member while speaking does not command the attention of the assembly; that his right to be heard is disregarded by improper disturbances, whispering, talking, and other evidences of contempt or indifference. What is the most prudent course for him to pursue?*

To submit himself to the pleasure of the assembly, and to sit down; for it scarcely ever happens that the members of any assembly are guilty of this piece of ill manners without some excuse.

190. *What is the* order, resolution *or* vote *of the assembly?*

An order is a command of the assembly; a resolution expresses its opinion or purpose; the term vote may be applied to the result of every question decided by the assembly.

191. *In stating a question to an assembly, is it necessary for the presiding officer to give it in the precise form proposed?*

When the proposition is long, as is usual with a petition, report, or the like, the form in which it is usually presented to the assembly is, "Shall the petition [or the report] be received?"

192. *In matters of trifling importance, such as receiving petitions and reports, withdrawing motions, reading papers, etc., what form is often used in disposing of them?*

No objection being heard, the formality of taking a vote is dispensed with, and the matter declared to be accepted; but should any member object, the presiding officer shall consider everything that has passed as void, and at once go back and take the matter up in regular form.

193. *What is the form used by the presiding officer in putting a question to the assembly?*

"As many as are of the opinion that [repeating the words of the question] say 'aye'; as many as are of a different opinion, say 'no.'"

194. *If the presiding officer is unable to decide the vote, or, after deciding according to his judgment, any member rises and questions* the vote, *what must be done?*

The members must be requested to form a division, either in two separate parties, or by rising in their seats, or by roll-call.

195. *If the assembly is equally divided on any question, how shall it be decided?*

By a vote from the presiding officer.

196. *Is it the duty of the presiding officer to give the casting vote?*

It is; but in doing so he may, if he pleases, give his reasons.

197. *When the expression of the assembly is taken by actual count, to whom does this duty belong?*

The presiding officer appoints tellers for each division, and the members are required to rise and remain standing until counted.

198. *In legislative assemblies, how is the question taken by vote?*

The method generally pursued in this country is the roll-call. The clerk is ordered to call the name of each member, who rises in his place and answers "Yes," or "No," and the clerk notes the answer as the roll is called. He then reads over, first the names of those who answered in the affirmative, and then the names of those who answered in the negative, so that if he has made any mistake, or any member has given inadvertently a wrong answer, correction may be made. The clerk then counts the number on each side, and reports the result to the presiding officer, who declares it to the assembly.

199. *After the affirmative side has been put, and voting begun, is the question open to debate?*

It is not a full question until the negative is reached: consequently it is in order for any member to rise and speak, make motions for amendments or otherwise, and thus renew the debate. In such a case, the question must be put again on the affirmative.

200. *What objects can be accomplished by such an interruption?*

The votes of members may be recorded who were not in the room when voting began; or those who have already voted may have changed their minds, and this gives them an opportunity to change their votes.

201. *When a question is taken by ayes and noes, the negative and affirmative taken at the same time, why can there be no opening of the debate, as in other cases?*

Because the question becomes full, both sides being acted upon at the same time.

202. *When, during a division, a question is raised concerning the right of any member to vote, how is it settled?*

The presiding officer must decide it without debate, his

act to be subject to revision and correction by the assembly after the division is over. The presiding officer may, if he please, receive the advice of members in regard to the objection, which they are to give sitting, in order to avoid even the appearance of a debate.

203. *Suppose, in counting the assembly on a division, it appears that there is not a quorum present, what shall be done?*

Proceedings must be suspended until a quorum is obtained, whether on the same or some future day, when the question must be taken up at that precise point.

204. *What is a motion for reconsideration?*

A question by which a matter, which has been acted upon, shall again come before the assembly in precisely the same condition as it was before being considered.

205. *Who has a right to make a motion to reconsider?*

In legislative bodies special rules regulate this; but where an assembly is subject to no special rule concerning this, it is the privilege of any member to move a reconsideration.

206. *Of what use are committees?*

To reduce to a convenient shape matters which require care to construct, or to conduct an investigation; or it may prepare for quick consideration any business which cannot be as conveniently discussed in the assembly session.

207. *What are the powers of a committee?*

It depends upon the general authority and particular instruction given it by the assembly at the time of its appointment. A vote taken in committee is as binding as a vote of the assembly. A committee has full power over what may be committed to it, except that it is not at liberty to change title or subject.

208. *What names are applied to the different kinds of committees?*

Select Committees, Standing Committees, and Committee of the Whole.

209. *What is a select committee?*

A committee especially selected to transact any business arising on a particular occasion.

210. *What is a standing committee?*

A committee appointed beforehand for the consideration of all matters of kindred nature which may arise during the session. A standing committee continues in existence, while a select committee is dissolved after the particular business for which it was appointed is transacted.

211. *How is a committee selected and appointed?*

First it is decided what number of members the committee shall contain. The members may then be appointed by the presiding officer, selected by ballot, or chosen by nomination and vote of the assembly.

212. *How is a committee elected by ballot?*

The same as in other elections: the members may be elected singly or all together, as ordered.

213. *How by nomination and vote?*

The names of the members proposed are put to question singly, and approved or rejected by the assembly, by a vote taken in the usual way.

214. *When a subject is referred to a committee not yet named, what custom is usually followed in the selection of the committee?*

No members are placed upon it who are directly opposed to the body of that subject, but rather those who are supposed to approve it.

215. *What is the duty of the secretary in regard to committees?*

To make out a list of the members, together with a certified copy of instructions under which they are to act, and to give the papers to the person first named on the committee, if convenient; if not convenient, then to any other member of the committee.

216. *Who is the chairman of a committee?*

Usually the first person named on the committee, but this is a matter of courtesy, every committee having the right to select its own chairman, who presides over it and makes the report of its proceedings to the assembly.

217. *When and where does a committee meet for the transaction of business?*

Whenever and wherever its members decide. But if directions on this point have been given by the assembly, the committee cannot regularly sit at any other time or place than in accordance with its instructions. Sometimes these instructions are to sit immediately and make its report forthwith; but no committee has a right to sit while the assembly is in session, unless so ordered.

218. *Can a committee transact business without the attendance of all its members?*

Unless some particular number has been designated by the assembly, a majority constitutes a quorum to do business.

219. *If a committee fails to meet at the particular time ordered by the assembly, what is the result?*

The committee is closed, and cannot act without being newly directed to sit.

220. *If disorderly words are spoken in a committee, what is to be done?*

They must be written down and reported to the assembly

for its consideration. A committee cannot punish disorderly conduct of any kind, but must report it.

221. *What is the difference in the action of a committee on a paper originating with it and on one referred to it?*

Where a paper is referred to a committee, it proceeds to the question of amendment; while a paper originating with it may be amended, as in the case of a paper referred, but at the close the question is put as to agreeing to the paper as a whole, as amended or unamended.

222. *If a committee is opposed to the whole paper referred to it, can it reject the paper?*

It cannot. If in its judgment the paper cannot be made good by amendment it has no authority to reject, but must report back to the assembly, and there explain its opposition.

223. *What should be the appearance of a paper originating with a committee and reported to the assembly?*

It should be in a clear draft, fairly written, without erasing or interlining.

224. *How should a committee treat a paper referred to it?*

It is not at liberty to erase, interline, blot, disfigure or tear it in any manner, but must report all amendments in a separate paper, stating the exact parts to be amended and the words to be inserted. If the amendments agreed to are many and minute, it may report them all together in the form of a new draft.

225. *When a committee has finished its work, what is next in order?*

A motion and vote that the committee rise, and that the chairman, or some other member, make its report to the assembly.

226. *How is the report of a committee made?*

The chairman, or the member appointed to make the

report, rises in his place and informs the assembly that the committee to which was referred such a subject or paper has, according to order, had the same under consideration and has directed him to make a report thereon, which he is ready to do when the assembly shall please. The person offering the report, or any other member, can then move that the report be now received. The assembly then decides whether it will receive the report at that time, or fix some time in the future for its reception.

227. *If the report is deferred to some future time, what is the manner of disposing of it then?*

When the time arrives the chairman reads the report in his place, and delivers it, together with all the papers connected with it, to the clerk or secretary, who reads it again. It then lies on the table until it suits the convenience of the assembly to take it up for consideration.

228. *If the report is of a paper with amendments, what is the method of proceeding?*

The chairman reads the amendments in their connection with the paper, showing the alterations made therein and the reasons assigned by the committee for its action; while in the reading of the report at the clerk's table the amendments only are read.

229. *Is a motion and vote necessary in accepting a report?*

It is usually dispensed with, although if any objection is made, or if the presiding officer sees any informality in the report, he should decline receiving it without a motion and vote.

230. *When a report is of considerable length, how is it usually presented to the members?*

It is printed, and each member given a copy. This renders the reading of the papers by the clerk unnecessary.

231. *When is a committee dissolved?*

When the report has been made and received, the committee is dissolved, and can act no more without new power; but if the report is not received the committee is not discharged, but may be ordered to sit again, and a time and place for such session appointed accordingly.

232. *What is meant by recommitting a subject?*

When any subject has once been in the hands of a committee, and the report made upon it is not satisfactory to the assembly, it may again be committed to the same committee or referred to some other.

233. *Does the previous action of a committee have any bearing upon a subject recommitted?*

None whatever, the whole question being again before the committee as if nothing had occurred there in relation to it.

234. *In how many forms may the report of a committee be presented?*

In three. First, it may contain merely a statement of facts, opinions or reasoning in relation to its subject without any general conclusion; second, it may contain a statement of facts, etc., with a general conclusion; or third, it may present a resolution, or a general conclusion, without any introductory part.

235. *When the report of a committee is accepted, how is it treated by the assembly?*

It is adopted, as though it had been originally done by the assembly without the services of a committee.

236. *Do the terms* accepting *and* adopting *have the same meaning?*

Practically, yes; though strictly the term "accepting" should be used when the report contains merely a statement of facts, reasoning or opinion, and the term "adopting"

when the report concludes with the resolutions or propositions.

237. *What is a* committee of the whole?

The whole assembly resolved into a committee.

238. *How is an assembly resolved into a committee of the whole?*

The presiding officer puts the motion that the assembly "do now resolve itself into a committee of the whole, to take under consideration (naming the matter before the committee)." If this is decided in the affirmative, he declares the result, and names some member to act as chairman of the committee; if objection is made, the chairman is chosen by nomination and vote. The chairman takes a seat at the secretary's table, and the presiding officer finds a seat elsewhere.

239. *What number is required to constitute a quorum of a committee of the whole?*

The same number required to constitute a quorum of the assembly.

240. *If at any time the number present falls below a quorum, what is the duty of the committee?*

On motion, the chairman rises, and the presiding officer resumes the chair. The chairman then informs the assembly of the cause of the dissolution of the committee, but can make no report of business transacted.

241. *Who acts as clerk in recording the business transacted by a committee of the whole?*

In legislative bodies it becomes the duty of the assistant clerk.

242. *How are the records of this committee kept?*

The same as those of any committee, and only the report to the assembly is to be recorded in the journal of the assembly.

243. *What is the difference between the proceedings of the assembly and of the committee of the whole?*

In the committee of the whole the previous question cannot be moved; the committee cannot adjourn; every member may speak as often as he pleases, providing he can obtain the floor; the committee cannot refer any matter to another committee; the presiding officer of the assembly, if a member of it, has a right to take part in the proceedings the same as any other member; and, in case of a breach of order, the committee cannot punish offenders, but must write down the incident and report it to the assembly.

244. *How may an improper discussion be avoided, which in the assembly can be governed by the previous question?*

It may be moved that the committee rise; and if it is apprehended that the same mode of discussion will be attempted on returning again to the committee, the assembly can discharge the committee and proceed itself with the business.

245. *If the business of the committee is not concluded at the usual time for the assembly to adjourn, or if the committee has other reasons for not continuing, how shall it proceed?*

A motion should be made that the committee rise, report progress, and ask leave to sit again. If this motion prevails, the presiding officer resumes the chair of the assembly, and the chairman informs him that the committee has, according to order, made some progress thereon, but for want of time asks leave to sit again. The presiding officer thereupon puts the question of giving the committee leave to sit again, and designating the time when the assembly will again resolve itself into a committee. If the request is not granted, the committee is dissolved.

246. *What is a sub-committee?*

A committee appointed by a committee for the purpose of expediting its business.

247. *Is the formality of a motion and question ever omitted in relation to the time of receiving a report?*

By general consent, it is. If the assembly is ready to receive it at the time, the members cry out, "Now! Now!" If it is not ready, some other time is proposed, as "To-morrow," or "Monday," and that is fixed by general consent; but any objection necessitates an agreement by motion and vote.

248. *What special duty should be imposed upon every presiding officer in the discharge of business?*

He should give the closest attention to the proceedings of the assembly, and especially to what is said by the speakers. By so doing, confusion will be prevented, offensive language checked, and harmony assured. His attention, interest, and impartial acts will inspire confidence, create union of feeling, and impress upon each member the necessity of transacting business for the benefit of all.

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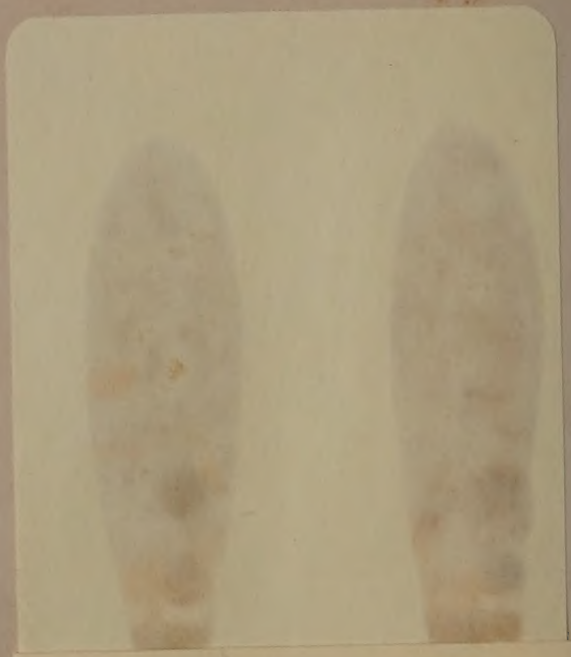

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